MAY 13, 1944

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Railway Age

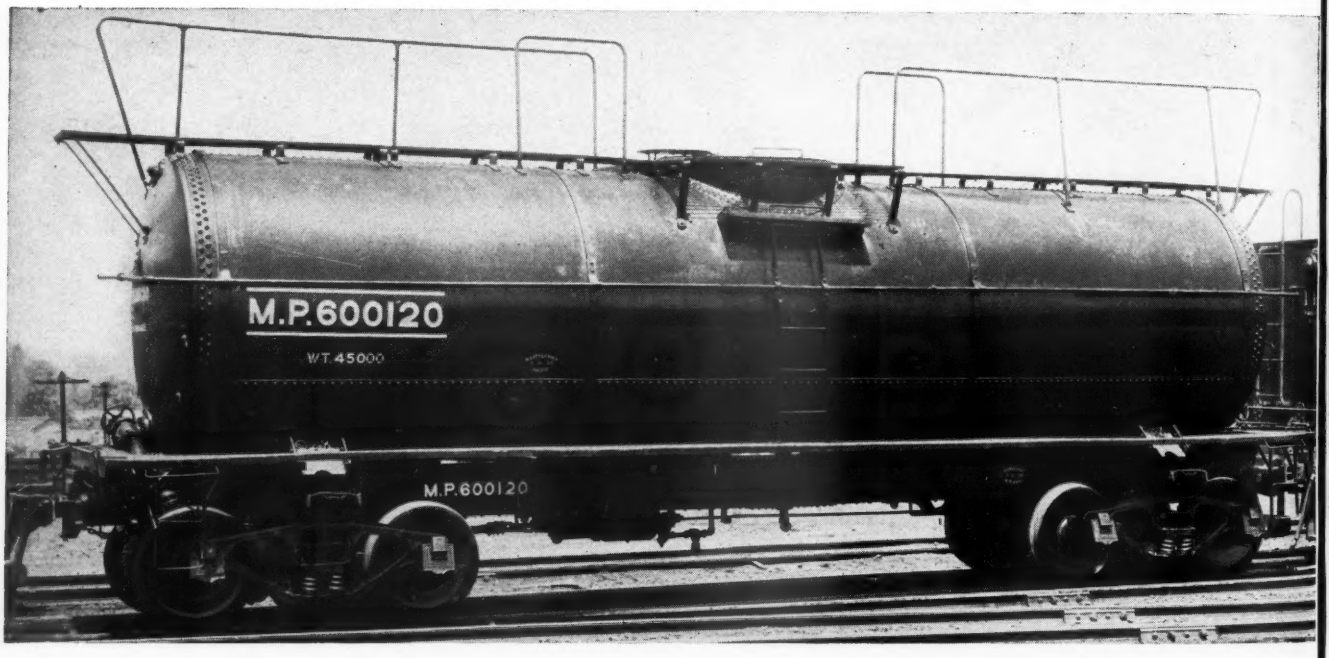
Founded in 1856

UNIT TRUCK

573,317

MAINTENANCE FREE MILES

A Record of Which We Are Justly Proud



UNIT TRUCKS were applied July 9, 1938
Official Inspection April 25, 1944

Watch this space in subsequent issues for the facts developed after this record of performance

Approved for interchange.

Full information as to licensees authorized to manufacture Unit Trucks will be furnished upon request.

UNIT TRUCK CORPORATION

140 CEDAR STREET **NEW YORK 6, N. Y.**

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In This Issue

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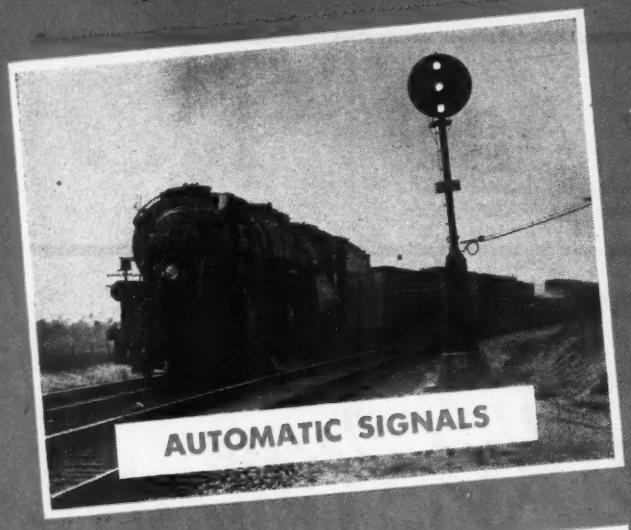

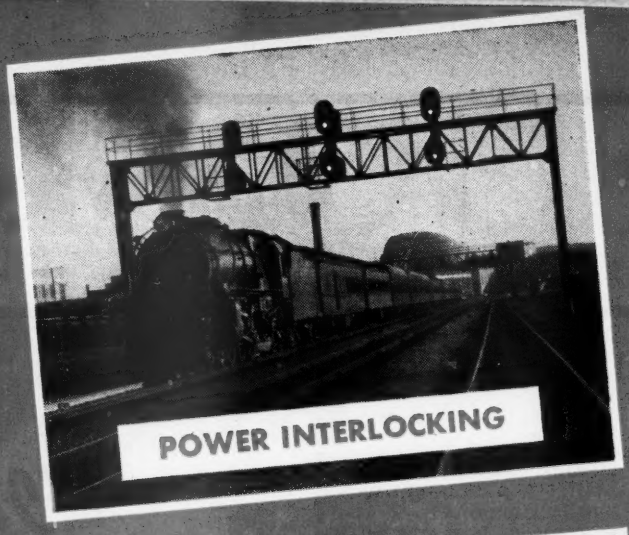

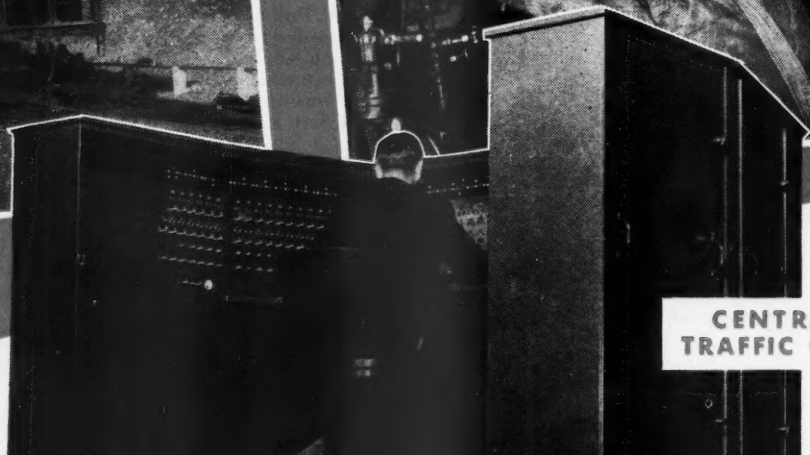

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MODERN Signaling Systems are acknowledged to be indispensable to the safe and efficient train operation of a modern railroad.

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The Week at a Glance

FALTERING CRUSADERS: There appears to exist a friendly rivalry between the National Association of Manufacturers and the U. S. Chamber of Commerce as to which is the more eloquent and effective in oratory, resoluting and otherwise declaring and propagandizing for the "American system of free enterprise." Both organizations are quite on a par, however, (as the leading editorial herein points out) when it comes to their reluctance to give their lofty principles definite application in transportation. Doubtless these earnest proselytizers deplore the slowness with which they are able to convert New Dealers, labor unionists, farmers, and others to their doctrine—but how can they hope to carry conviction among outsiders when they themselves haven't the fortitude to give effect to their principles in a case lying right in their own laps? Successful exhorters throughout the centuries have repeatedly demonstrated that no device available to them is so dramatically compelling as the practice of their own doctrine, at some obvious personal sacrifice. How deeply are principles cherished by those who are plainly unwilling to pay the slightest price to defend them?

●

COMPETITIVE BIDDING: The I. C. C. has finally given way to insistent critical voices, and has concluded that after June 30 it will require competitive bidding for all railroad securities, except stocks, securities issued in exchange for outstanding obligations, and in a few other like cases. The majority did not find evidence of "banker domination", but concluded that competitive bidding would reduce costs of capital. Commissioner Porter dissented on the grounds that the majority's action constituted an infringement upon management. Commissioner Miller concurred in this view, observing that stockholders have the power to remove managements who do not protect their interests; and he invited such holders to take a greater interest in how their property is being operated.

●

HARD-TO-QUIT BILL: Hearings on Senator Clyde Reed's bill—designed to make it all but impossible for the railroads to cease operation of profitless branches—are reported in the news pages herein. A B. of L. E. spokesman indicated agreement with the purposes of the bill but laid the blame for abandonments in part on the government for its persistent subsidization of the railroads' rivals; and he won agreement from Senator Reed when he cited the "monumental failure" of the Board of Investigation & Research to produce authoritative information for Congress on this issue. The I. C. C., and both Class I and short line railroads, testified in all-out opposition to the measure.

●

ECONOMIC BIGAMY?: The State of Tennessee had an advertisement to promote industrial development, on page 82 in "Business Week" of May 6. The signature carried the slogan "The First Public Power State"—which seems to indicate a belief that the state's progress in socialization will, somehow, prove an incentive to private industry to locate within its borders. The advertisement was captioned "Postwar profits will be affected by transportation costs" and listed 12 "basic advantages to plant location in Tennessee," among them that the state offers an: "Inland waterway system of three great rivers for low-cost transportation. . . ." *However,* to illustrate low-cost transportation, the advertisement presented a photograph of a Diesel-powered train. All this leaves your reporter just a little up in the air as to whether it is socialism or private business that Tennessee state authorities love most.

●

RIO GRANDE TRAIN RADIO: The D. & R. G. W.'s recent significant experiments with train communication radio are reported in an article herein by the road's communication superintendent, W. W. Pulham. High-frequency f. m. sets employing portable gas-engine-driven generators were used. Head and rear ends of a 70-car train kept in continuous communication with no trouble except in the Moffat Tunnel, where, it is believed, the difficulty can be easily remedied. Equally satisfactory results were secured in transmission between a yard office and a yard locomotive, and between a train and an automobile 53 miles distant. The B. & O.'s experimental project with f. m. high-frequency radio is reported in our news pages.

●

PURCHASES IN '43: Purchases of fuel, materials and supplies (exclusive of rolling stock) by all railroads in 1943 totaled $1,432 million—an increase of about 10 per cent over 1942. Excluding fuel, these purchases amounted to $889 million—the highest total attained since 1929. Details, by individual roads, are given in an article in this issue.

●

IF TRAFFIC DECLINES: If postwar traffic should shrink to the 1940 level—with wages and other costs as at present—the railroads are likely to go deeply into the red. Such is the depressing but realistic warning of the Bureau of Transport Economics and Statistics in its monthly analysis of transportation figures, reviewed in the news pages of this issue. The I. C. C. statisticians apply wages and other expenses at the present level to 1940 traffic, and arrive at a net income deficit of $447 millions before federal taxes. The actual 1940 net income before federal taxes was $249 millions—which gives a general idea of how hard a fight the carriers are going to have to make to hold traffic, if they are to sustain the present price level for labor and materials.

●

"PRODUCTIVITY OF LABOR": The Bureau of Statistics notes an increase of 3.6 in car-miles per employee-hour from 1940 to 1943, but it cautions against taking such an index as necessarily reflecting an increase in the "productivity of labor." Actually, it explains, such an improvement "may result from better tools of production and better management, or from more complete utilization of the plant. . . . One could also say that there has been an increase in the productivity of capital."

FREEDOM AND THE MAILS: An aircraft motor manufacturer in a current advertisement urges that all first-class mail be arbitrarily diverted to planes—arguing that "the accelerated tempo of modern business demands same-day, or at most next-day, delivery." If "modern business" really demands (in the economic sense) such speed, then air mail service at rates reflecting its higher costs will expand automatically to meet this demand, as soon as additional planes become available. Can the principles of freedom for the individual and of enterprise be obeyed in this situation otherwise than by basing air and rail postal rates on their comparative costs, allowing the customer to divide his patronage according to whether speed or economy is his more insistent desire?

●

VACATION DISPUTE: Testimony began last week before the arbitrators chosen to resolve the disagreement between the B. of L. F. & E., the O. R. C., and the S. U. of N. A., on the one hand, and the railroads, on the other, on what the basis of paid vacations is to be for members of these organizations. The railroads contend that the terms of the settlement of this question (which was part of the strike crisis dispute at the end of last year) will be satisfied by a donation of six days' "basic" pay—whereas the unions insist on seven days' actual earnings. Progress in hearing the case is reported in our news pages. There are other disputed points, but the central issue is that outlined in the foregoing.

●

ORGANIZATION vs. DISASTER: One day last September fire swept through the Big Four's engine terminal at Bellefontaine, Ohio. In a few hours, 33 stalls of the enginehouse, a machine shop and other key facilities had been destroyed. Despite this disaster (in which, also, 23 locomotives were damaged), not a single train suffered delay. The organization went right into action to provide emergency servicing of engines, and reconstruction began at once. In a little less than four months the terminal was again operating at 100 per cent of normal. How this remarkable result was achieved (and a description of the new facilities) is the subject of an illustrated article in this issue.

●

DIESELS AT HUMPING: 1000 hp. Diesel-electric locomotives have been used since 1942 by the Burlington in hump operation at Galesburg and—as an article herein reports—have given a good account of themselves in handling strings of cars averaging 65-70, but running up to 105. The Diesels appear to be handling about 200 more cars per 8-hour shift than the steam locomotives they have replaced, besides effecting economies in locomotive and track maintenance and in fuel.

●

PULLMAN DIVORCE: The details of the Court's requirements with respect to the complete and final divorce which it has decreed between Pullman's manufacturing and operating functions—with comment by Pullman President Crawford—are given in a brief article in the feature section of this issue.

Diver checks trench-laying of high-voltage submarine cable on ocean floor.

When a submarine cable goes down, it has to be right and stay that way. The cost of raising such cables for repair is prohibitive.

For many years Okonite has supplied the railroads with signal and power cables armored and protected for submarine service. They have established enviable performance records under the most severe service conditions.

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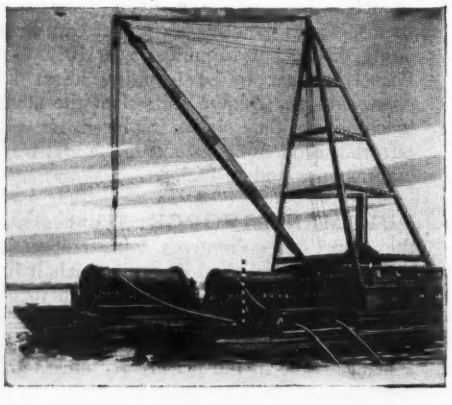

Ask Okonite engineers to make recommendations on any problems concerning electrical wires and cables. These will include proper cable design and test procedure, preferred shipping methods and suggestions as to installation practice. . . . The Okonite Company, Passaic, New Jersey.

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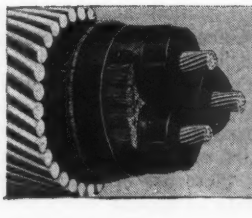


OKONITE

INSULATED WIRES AND CABLES

RAILWAY AGE

The Chamber of Commerce on Transportation Policy

The efforts of associations of business men to advocate "free private enterprise," and at the same time evade or compromise on the issue of subsidies, especially in transportation, are almost pathetic. In an editorial in *Railway Age* of April 29, entitled "What is 'Free Enterprise?'" we showed how and why the National Association of Manufacturers is trying to evade it. Now the Chamber of Commerce of the United States is considering a proposed statement on national transportation policy which includes the following:

> "Highways in varying degrees have values accruing to all and special values accruing to certain groups. As far as practicable each group, including the general public, should contribute to the costs of building and maintaining the highways in proportion to their respective benefits, in addition to bearing their fair share of the general costs of government."

What these obscure declarations mean is: Highways confer some benefits on the general public, such as increase in the value of property adjacent to them; therefore, a large part of the cost of building and maintaining highways should be paid by the general public. Highways also confer special benefits on those who use them; therefore, the rest of the cost of building and maintaining highways should be paid by their users "in proportion to their respective benefits."

But railways, factories, grocery stores, movie houses and every other kind of property representing investment also confer benefits on the general public as well as upon those who use them. Why, then, should not only the cost of building and maintaining highways, but also the cost of building and maintaining railways, factories, grocery stores, movie houses and so on be paid largely by the general public? But, like other private enterprisers, the railways pay directly, and those who use their service pay indirectly, all the costs of building, maintaining and operating their properties, including heavy *ad valorem* taxes levied on all railway property for the support of government. It follows that, in proposing that the general public be required to pay a large part of highway costs, and users of highways only the rest of such costs "in proportion to their respective benefits," the U. S. Chamber advocates a policy calculated to give carriers by highway a great competitive advantage over carriers by rail.

In proposing further that "No part of special user levies should be diverted from highway purposes," the Chamber advocates giving carriers by highway another competitive advantage over the railways. For what this means is that all the taxes paid by the users of highways for their use should be spent in building, improving and maintaining the highways, for the benefit of their users, although none of the taxes paid by the railways and other property-owners are spent upon the properties they use for the benefit of those who use them.

The U. S. Chamber has gone all out for carriers by highway against the railways. The policy advocated by it is exactly the policy of subsidization of highway carriers sought by these carriers and their supporters, and opposed by the railways and all others who oppose subsidized competition with the railways.

Why pretend to favor "free private enterprise" and at the same time propose such a national transportation policy? The highway system of this country, by being freed of *ad valorem* taxes, and financed as it is so largely by payments exacted from others than its immediate users, is a man with brass knuckles in a free-for-all where

the other contestants wear 12-oz. gloves. When the highway system was relatively small its non-Queensberry armament was not immediately lethal to the other contestants, but it is a $40-billion colossus now and still growing.

Can the Chamber of Commerce suggest how post-war railroad improvements to plant are going to be financed (beyond those which the railroads can make from cash reserves), with railroad stock now selling at less than 40 on the Dow-Jones average? Can it explain why railroad stocks should be selling at such prices, with earnings as they are, except for the fear which investors have of putting their money into a business that has to compete with seemingly infinite outlays from the federal treasury? The nation must have the railroads; and, if they cannot be adequately financed from private sources, as probably they cannot be if governmental favors to carriers using publicly-owned transport plant are to continue and be increased, the only alternative ultimately will be to seek financing of the railways also from the public treasury. But that would be an extension of socialism, which the Chamber of Commerce professes to abhor.

When are men professing to speak for business going to quit issuing infantile doubletalk in pretended defense of private enterprise? If they are going to persist in advocating *means* inevitably leading toward socialism, why do they not have the candor and courage to say that their *goal* is socialism? The inroads of socialism into transportation are plain to any observer. Equally plain is the means of halting these inroads—namely, subjecting the socialized part of transportation to the same regime of old-fashioned double-entry bookkeeping that obtains in the privately-owned part of transportation and in every other kind of business that must pay all of its costs out of its earnings.

Training Leaders

Worthy of mention among the various types of foreman training used in the railroad mechanical department is that inaugurated some time ago on the Illinois Central. It was felt that something constructive should be done to coach and encourage the foremen to improve their leadership ability. The first problem was to locate a course of training that had been developed over a considerable period and whose value had been fully demonstrated. The plan of the National Foremen's Institute, Inc., was selected. It includes 25 separate manuals, which Lee Robinson, superintendent of equipment, points out in an article in the Illinois Central Magazine, "embody the basic, common-sense principles of good foremen management, delving into the fundamental principles of human nature itself and including all phases of foremen's problems."

Two groups at the Paducah shops, one of twelve and one of fourteen men, are now well along in this course. A similar program was recently introduced in the Centralia shops. Competent leaders were selected for each of the groups, which meet at bi-weekly intervals. Attendance is not compulsory, but it is said that few of the men miss any of the meetings. To stimulate additional interest, a scheme has been devised so that members can measure their progress by the use of self-rating sheets. The meetings are held on company time, beginning at 3:45 p.m., and last for about an hour. Studying the principles of good foremanship in the manuals and discussing their application in the conferences has proved most helpful. The results thus far may be summed up in a reply of one of the foremen as to whether he was obtaining any benefit. His prompt retort was, "Absolutely!"

Qualifications of a Public Relations Officer

Public understanding of, and a friendly feeling toward, a railroad corporation is a necessary condition to its prosperous survival—both traffic-wise and from the standpoint of regulation. Forthright and competent press relations, advertising, and publicity are an integral part of successful cultivation of public understanding —and these duties require technical competence in all the varieties of journalism—a specialized skill, the possession of which has often been taken to describe and circumscribe the public relations officer's functions. Actually, technically adept press relations, while of the utmost importance to public understanding of and friendship to a railroad, are not, of themselves, a sufficient means to the objective.

In addition—and as a part of an effective public relations program—it is requisite that employees deal courteously with, and impart correct information to, the public. Employees cannot disseminate information which has not been given to them in a form in which they can assimilate it, nor is it likely that all or most of them—even with the best intentions—will at all times give an impression of courtesy in the absence of specific instruction. The public relations officer, obviously, cannot supervise employees of other departments, but his knowledge and skill nevertheless are a most desirable ingredient in such supervision. The clear implication, therefore, is that the public relations officer should be an adviser to the managers of other departments on means by which their employees may be led to deal courteously with the public and correctly inform it of the railroad's affairs.

Granted that a friendly and accurately-informed public is desirable and even indispensable to a railroad's well being—and that the promotion of such a goal is the public relations officer's specific task—it follows that his job has both departmental and staff aspects; the former in his management of press relations and publicity, and the latter in his advisory relationship to all other departments. In assisting a departmental organization in informing its employees about railway activities so that they, in turn, may convey adequate and accurate information to the public, the public relations officer—if he performs this service successfully —cannot well avoid being something of an interdepart-

mental "liaison officer," leading each department to view its departmental duties in proper subordination to the good of the company as a whole. The fact of departmental interdependence is a necessary part of the knowledge of their company which employees require if they are to interpret the railroad accurately to the public, and the top men in a department cannot instill an attitude unless they themselves acquire it first. Since the absence of this attitude is an obstacle which must be removed before fully successful public relations can be achieved, the cultivation of it throughout the organization is an inevitable part of the assignment of the officer responsible for public relations.

Each railroad department, thus, needs the collaboration of the public relations officer to enable it to put its best foot foremost in the relationship of its personnel to the public. There is, also, no other officer on the railroad whose experience and training so equip him to advise, in advance, what public reaction will be to new railroad policies and decisions—the moving of a shop, the cancelling of a train schedule, or what color to paint station buildings.

A successful public relations officer, accordingly, needs to be a competent publicist, as well as a well-informed railroader; a man of wide and amiable acquaintance in all walks of life; thoughtful and well-read; and able to locate and analyze trends in popular opinion, as well as participate in and influence them.

On Spending to Save

It is recognized in every quarter that the post-war era will be a period of increasingly keen competition in transportation, which will see the railroads struggling to hold their own against government-subsidized carriers. To a considerable extent the contest will be one of costs; to compete successfully under the conditions that are expected to prevail, the railroads will find it necessary to resort to every conceivable expedient for reducing expenses. The success that will attend their efforts in this direction will be in proportion to the energy, ingenuity and aggressiveness with which they attack the problem.

One way in which the railroads can achieve substantial reductions in operating expenses is by making improvements to their fixed properties of the types designed to promote operating efficiency or to reduce maintenance costs. The railroads generally will emerge from the war in better financial condition than for many years, and on many of them this situation will be regarded as a long-sought opportunity to effect improvements designed to effect economies, and thereby to strengthen their competitive position. If they are able—and willing—to make the most of the possibilities in this direction, it is not too much to say that they will have established a sound basis for coping with the future.

Under normal conditions, railroad engineering departments are constantly making studies and plans for

The Doughty Defender of Free Enterprise

The Warrior: "I Prefer Not to Interject Myself into This Controversy."

See Railway Age, April 29, Page 805

capital improvements, together with estimates of the savings to be effected by them. Many such studies are concerned with projects involving the replacement of worn-out or obsolete facilities with modern installations having lower operating and maintenance costs. Others are concerned with the possibilities of reducing maintenance expenses (and improving riding conditions) by strengthening the track structure through the use of heavier rail, longer ties and better ballast, and by stabilizing the roadbed by various means, such as improved drainage or sub-soil grouting. These are only examples of a multitude of types of projects by means of which economies in operating expenses can be achieved.

Estimates of the savings to be effected by such projects frequently show potential economies which, in terms of the rate of return on the investment, would attract the attention of the most conservative business men looking for investment opportunities. Is there an engineering department on a major road that cannot produce, almost at a moment's notice, complete plans for any number of projects which, if carried out, would bring annual returns of anywhere from 15 to 50 per cent or more on the investment?

In the past, expenditures for such projects have been restricted on many roads by an attitude of conservatism, which was traceable in most instances to the scarcity of funds available for such work. Following the war, however, it will be encumbent on the railroads to re-examine their attitude toward such projects in the light of the new situation that will then prevail—a situation in which an improved financial position will be accompanied by a greater need than ever to undertake projects designed to reduce operating expenses. It is not too early to begin to examine such possibilities.

Accurate Billing For Freight Car Repairs

An important part of mechanical department work which does not always receive the recognition it deserves from higher railway officers is the billing for repairs required to keep freight cars operating while on lines other than those of the owner. It may be said that this repair work and the billing therefor in accordance with A. A. R. rules represent work which individual carriers do for each other and hence tends to wash itself out, but as long as some railroads own proportionately more freight equipment than others and the percentage of equipment on foreign lines varies as widely as at present, it is highly important to keep the records straight as between individual carriers and also private car owners.

Moreover, the A. A. R. billing rules have been developed over the years and are being administered with a view to making sure that at least enough repair work will be done to freight cars while off the owner's line to keep them in condition for safe and reasonably efficient operation.

One further objective, and one quite generally met, has been to adjust the billing-rule prices so near actual costs that individual roads will not be encouraged to make more repairs than actually required on foreign cars with an eye to profiting at the expense of other carriers.

Some idea of the magnitude of repair costs involved in this discussion is afforded by the fact that a single fairly large railroad may spend as much as $5,000,000 a year for the maintenance of its own freight cars in company and off-line shops and, in addition, do $2,000,000 worth of repair work on foreign cars. The first requirement in making an accurate accounting of the latter item is to have repair cards made out for individual cars based on essential work, as specified by experienced car inspectors and supervisors. All items of repairs must be recorded clearly; their location indicated; size or weight shown when necessary; and all other information noted as clearly defined in the A. A. R. rules.

The desirability of having these billing repair cards carefully prepared and checked before submission to the central office on each road is apparent. Even then, experienced bill clerks can frequently discover improper practices on repair tracks and in transportation yards which in turn are called to the attention of the supervisors responsible and corrected. The entire procedure is one involving the full cooperation of well trained specialists in car repair and billing practices if best results are to be secured.

The loss of experienced car inspectors and bill clerks to military service and their replacement by new men has increased the difficulty of keeping billing repair records up to date and accurate. In one office, for example, where the number of repair cards received decreased from 36,455 in March, 1943, to 33,914 in March, 1944, the number of cards returned due to errors increased in the same periods from 204 to 238. It is obvious that railway car departments need all the help and support possible from higher railway officers in their attempts to keep freight car inspection and billing repair work up to desired standards.

Index to Volume 115

The indexes to the latest volume of the *Railway Age,* July to December, 1943, are now ready for distribution and copies may be had by those subscribers desiring them. Requests should be addressed to the Circulation Department, *Railway Age,* 30 Church Street, New York 7, N. Y.

Subscribers who have in previous years made application for the index need not apply again; they will continue to receive it as long as they continue to subscribe.

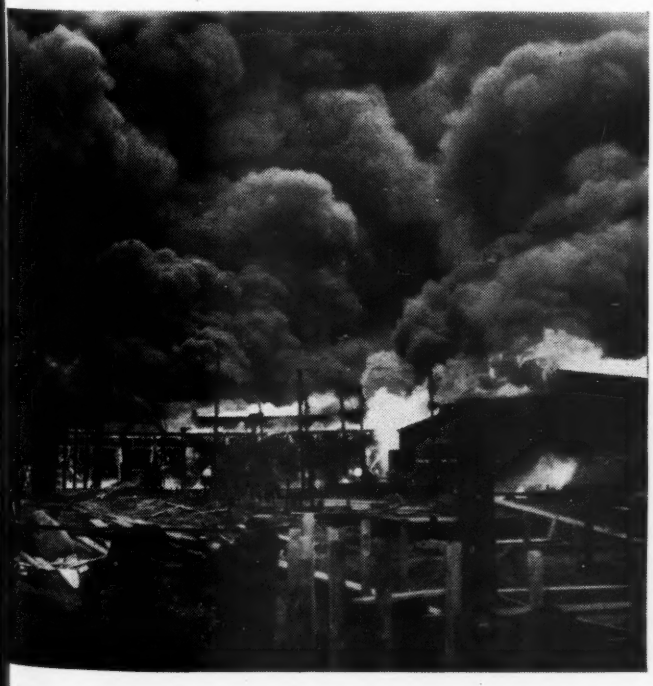
A Quick Recovery from a Bad Fire

N. Y. C. terminal facilities destroyed at Bellefontaine, Ohio, were rebuilt in record time, while operations were carried on without a single delay to trains

ON September 4, 1943, a fire swept the large engine terminal of the New York Central (Big Four) at Bellefontaine, Ohio. In less than 3½ hours, 33 stalls of the enginehouse, a machine shop, a water softener plant and the well houses at this point were destroyed. The fire also damaged the deep well pump motors and 23 locomotives. Coming as it did just before the traffic peak of the year and striking one of the most important engine terminals of the entire New York Central System, the fire was a crippling blow.

Important Terminal

With the exception of Collinwood (Cleveland), Ohio, the Bellefontaine terminal is the most important engine terminal on the New York Central System west of Buffalo, N. Y. It is the principal maintenance terminal on the entire Ohio district, which embraces the territory Indianapolis, Ind., to Cleveland; Cleveland to Cincinnati, Ohio; Cincinnati to Toledo, Ohio, and Cincinnati to Jackson, Mich. Ordinarily 100 locomotives are serviced at this point each day. With a modern machine shop and 50- and 100-ton drop tables, the terminal was equipped to make light and intermediate repairs and I. C. C. inspection on all major freight and passenger power on the district. To maintain the schedule, intermediate repairs and I. C. C. inspection had to be completed at this point, on not less than four locomotives each day. An idea of the operating importance of this terminal may be derived also from the fact that 1½ million gal. of water and 1000 tons of coal are used daily.



At the Height of the Fire Which Destroyed 33 Stalls and Damaged 23 Locomotives

Ironically, the fire occurred just as 2½ years of improvement work at this terminal was being completed. In 1941, a five-stall section of the roundhouse had been extended to make room for a modern drop-pit section with new 50-ton and 100-ton drop tables. In 1942 and 1943, twelve 92-ft. stalls had been replaced by sixteen 130-ft. stalls of modern enginehouse. At the time of the fire, the enginehouse consisted of 10 old 92-ft. stalls, the new 16-stall section, the new drop pit section and 10 other 92-ft. stalls.

The fire started in the fifth stall of the new 16-stall section at 12:05 p.m. on September 4. It was caused by a spark from an oxy-acetylene welding torch which was being used to weld a pipe line adjacent to and near the top of the creosoted wood columns supporting the roof. It is thought that the heat from the torch caused a blister on the creosoted column, which exploded and was ignited by a spark from the torch. A strong northeast wind was blowing at the time. Although the railroad fire force was called out immediately, the fire was beyond control in 15 min. City fire-fighting forces from Bellefontaine and fire-fighting companies from six other nearby towns finally put out the fire at 3:30 p.m. As a result of the fire, all of the modern facilities for repairs to the large road locomotives were gone, the machine shop and water supply were gone, 23 locomotives had been damaged and the turntable power line was burned out, putting that facility out of service. The fire fighters managed to save the old 10-stall section of the roundhouse, which had stalls 92 ft. long, the office building, service building, oil tanks and the old erecting shops, now used for the general storage of material.

No Trains Delayed

In view of the damage to the terminal and to the 23 locomotives, it is remarkable that not a single passenger or freight train was delayed. Immediately, all locomotives approaching Bellefontaine were ordered to take full tanks of water at the nearest supply points, and arrangements were made with the municipality to use a limited amount of city water. All passenger trains were run through. Freight power was handled over ash pits, serviced outside and then run through on the same train. The turntable was restored to service by 7 p.m. Saturday, the day of the fire. One hundred eighty mechanics, helpers and apprentices in the mechanical department at Bellefontaine were distributed to other points on the system, keeping only a small force there for light running repairs.

The damage to the 23 locomotives, although only a temporary loss, was also a disaster at a time when every available unit of power was badly needed. All of them had to be sent to Beech Grove, Ind., for repair. Although the first of these locomotives was back in service in nine days, the damage to all of them averaged

$3,500. Additional power was sent to the district from Collinwood, Gardenville, N. Y., and the New York Central lines east of Buffalo. Because the water supply was limited, nine Diesel switchers were also sent to do the switching in the three yards at Bellefontaine.

Reconstruction Planned

Reconstruction of the facilities destroyed was started immediately. One hundred twenty-five men were shipped in from extra gangs. Trucks, cranes and bulldozers were secured from contractors at Cincinnati, Indianapolis and Bellefontaine and brought in over the highways. A police escort was secured for the larger units of such equipment to save the time required to secure a permit to bring it in over the highways. The men and equipment were put to work as fast as they arrived, moving debris out of the way. This debris was at first pushed to one side to make room for new construction and was loaded and removed later.

On the day following the fire, engineering and operating officers met on the ground and assessed the damage. Since detailed plans were available for the new 16-stall section, which had just been completed, it was decided to rebuild this section first. From the plans for this part of the enginehouse, a list was made of the lumber and other critical materials needed and this list was telegraphed to the War Production Board. The War Production Board co-operated by wiring priorities for the materials and also by authorizing the railway to secure lumber from the Hutchins Lumber Company, Blue Island, Ill., (a restricted company, controlled by the government).

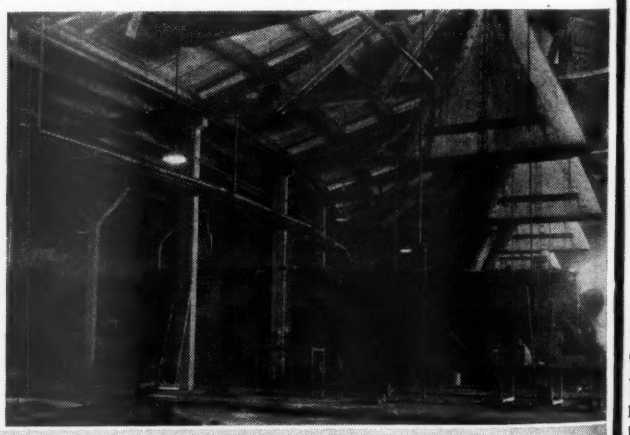
On Sunday also, numerous brick companies were contacted but it was discovered that the smaller brick companies were not producing because of the labor shortage. Suitable brick were finally located at the Belden Brick Company, Canton, Ohio, which had 500,000 brick in its yard. An order was immediately placed for 1,000,000 brick and arrangements made to start shipments at once. On the same day, officials of the Southwestern Portland Cement Company, Osborn, Ohio, were also contacted and orders were placed for the cement and brick mortar to be shipped immediately. Glass blocks were secured from the Owens-Illinois Glass Company, Muncie, Ind., and other materials were secured in a like manner, or from railroad stocks. In this manner all of the important items of materials were ordered or located on Sunday. A considerable amount of improvising in design and construction was done on the job to avoid the use of critical materials. This will be detailed further on.

At the same time that material was being ordered, arrangements were made with the Walsh Construction Company, Davenport, Iowa, and New York to do the rebuilding work. Key men of this company arrived on the job on Monday, September 6, two days after the fire.

Brick and mortar arrived late the same day and on Tuesday morning, less than three days after the fire, brick laying was started on the new walls of the 16-stall section.

The job was placed on a 10 hr. a day, seven days a week basis with 200 men working. Not much trouble was experienced in securing carpenters but bricklayers were hard to get and common labor was exceedingly hard to find. Bricklayers were secured from Indianapolis, Cincinnati, Cleveland and any other place they could be found. A local brick foreman, who had been in charge of the construction of the 16-stall section, completed just before the fire, was again placed in charge of the brick laying work. Advertisements for labor were inserted in the newspapers and men were sent out to scour the countryside, but in order to obtain sufficient common labor, the railroad finally had to turn over an extra gang of 40 men to the contractor. At the beginning, this gang included some native white labor while the remainder were negroes. However, the white labor all left before the job was completed and the turnover among the negroes was also heavy. Only 7 of the original gang were left at the end of the work.

Within a few days after work was started on the new 16-stall section of the enginehouse, rough plans were drawn up and requests for priorities for materials to rebuild the rest of the terminal were submitted to WPB. These priorities were granted with certain reservations, requiring that a considerable amount of the steel in the drop-pit section be secured from idle or excess stock and that reinforced gypsum plank be used instead of wood sheathing on all roofs, except the enginehouse. To comply with these restrictions, the railroad and the



Right Above — Interior of Part of the New 16-Stall Section. Note the Timber-Connector Roof Truss Construction. Right — Exterior View of the Same Section. Note the Glass Block and Arched Window Construction.

contractor had considerable difficulty locating second-hand or surplus steel and the railroad had to redesign the steel work to utilize what could be obtained.

Speed of Reconstruction

The speed with which the terminal was reconstructed was due in large part to resourcefulness of the railway forces in marshalling all aid possible in the shortest possible time. Everyone co-operated—material supply people, the contractor and the railroad forces were all fully informed of the importance of the terminal and the need to get reconstruction completed before severe winter weather could interfere. Fortunately for all concerned, very favorable weather was experienced with little rain or cold weather until December, and by that time reconstruction was so far advanced that the weather could make little difference.

The first 16-stalls of the enginehouse were rushed to completion and the remainder of the work was also started as soon as possible, without waiting for plans. A design engineer was moved to the terminal and stayed on the job. The work was done in many cases by starting from skeleton plans and working out details on the ground as construction progressed.

The materials, in general, came in as fast as they could be utilized. Carloads of materials were traced every day and the whole railroad was alert to see that shipments needed for this construction were not delayed en route. By the time the brick walls were up for each part of the enginehouse, beams, purlins and trusses were on hand.

Three of the first eight stalls were turned over for service on October 16 and the remainder by November 6. The other eight stalls of the 16-stall section were ready on November 15. The machine shop was ready for the installation of machinery on December 15, the drop pit section was ready on December 30 and the remaining 10-stall section of the enginehouse was completed on January 24. All other facilities had also been rebuilt or repaired on or before that date. By December 15, 65 per cent of the regular mechanical forces were back at work at Bellefontaine and the terminal was operating at 50 per cent of normal operation. On January 1, all employees were back and normal operations had been resumed.

Changes in Design

In general, the reconstructed portion of the enginehouse is similar to that destroyed by fire. The old concrete foundations were used, although the floor and pits were damaged and had to be removed and rebuilt. The new portion of the enginehouse has brick walls with large glass block panels in the outer wall at the end of the stalls, and a timber roof covered with built-up roofing. Unlike the old enginehouse, however, the columns supporting the roof are of reinforced concrete and all the wood in the new enginehouse is untreated. Since the fire, the New York Central has decided to discontinue the use of creosoted wood in enginehouses and is studying recommendations for the use of salt-treated wood in such structures.

The entire design was based on the elimination of steel everywhere possible. For example, brick arch construction was used over the window openings to avoid the use of steel lintels. In the new engine pits, concrete without reinforcement was used with short sawed ties imbedded to carry the rails. Formerly the pits had been constructed with steel beams for the rail support, resting on concrete. Fibre downspouts were used in place of metal downspouts. To replace many of the cast iron door columns which had been cracked or broken in the fire, some were taken from an enginehouse at Galion, Ohio, and others were patched or spliced.

In addition to design features avoiding the use of steel, some other substitutions were necessary. For example, Douglas fir was used instead of yellow pine timber and hemlock gutters were used instead of fir. During the course of the work (except for the first 16 stalls), the WPB granted various priorities as the work progressed. In each instance, as low ratings as possible was given that would enable the railroad to secure the material. These ratings varied from AA-1 to AA-5.

Enginehouse Details

The new engine stalls have concrete pits 100 ft. long. These pits are heated by hot air blown through ducts of vitrified clay pipe tapering from 30 in. to 20 in. in diameter and located under alternate floor spaces between the stalls. Four 12-in. vitrified pipe outlets from these ducts open into the side walls of each pit. This heat serves to thaw and dry out the engines in winter and to heat the entire enginehouse.

The side wall, fire walls and rear walls of the enginehouse are 13 in. thick, with 17-in. brick pilasters. Three new interior brick fire walls separate the new 16-stall section into two 8-stall sections and the drop-pit section from the remainder of the enginehouse. In the rear wall, the panels are approximately 29 ft. wide, center to center of pilasters, and each of these panels, except at doorways, contains two large windows 10 ft. 6 in. wide and 14 ft. 3 in. high. Each window is composed entirely of glass blocks except for three pivoted sash at the bottom. The side wall panels are approximately 28 ft. wide, with two similar but somewhat smaller window areas in each, having two pivoted sash at the bottom.

The reinforced concrete columns in the interior of the enginehouse are 12-in. by 18-in. by various lengths. These were cast on the job and are bolted at the floor to anchor straps partially encased in concrete pedestals. The columns are protected at the bottom by a ⅛-in. sheet metal guard five feet high and the space between the guards and columns was filled with grout.

The concrete roof columns are located between the stalls, with three intermediate columns between the piers at the doorway and the rear wall. These are spaced 28 ft. 6 in. from the door columns and then 28 ft., 25 ft., and finally 49 ft. to the rear wall, leaving a working space near the front of the locomotives that is relatively unobstructed.

A plain flat roof with a slope of ¾ in. in 12 in. covers all except the portion of the stalls near the back wall of the enginehouse which is of hip construction supported by wood trusses. The flat portion of the roof is supported on 12-in. by 18-in. beams set on each row of columns parallel to the stalls and braced with 8-in. by 12-in. members at the top of the columns. Wood purlins 4-in. by 14-in. and 6-in. by 14-in., spaced on 5-ft. centers, support the roof deck, which is of 2½-in. T & G sheathing. The smaller purlins are used to support the roof to a point midway between the second and third columns where the distance between the stalls is 22 ft. or less. The larger purlins are used beyond this point for the longer spans. All purlins are butted over the roof beams and are connected by ½-in. steel straps 2½-in. by 18-in. long with four ½-in. lag bolts. Between the third interior column in each row and the back wall, the roof is supported by symmetrical Belgian-type wood trusses 49 ft. 6 in. long and 8 ft. 3 in. high

at the center, measured from joint centers to center of chords. These trusses have sloping top chords and are built up, using galvanized timber connectors. The top chords are composed of two 14-in. by 14-in. timbers. The lower chords and diagonal web members are made up of two 4-in. by 12-in. timbers. The other web members are of 4-in. by 8-in. and 4-in. by 6-in. timbers. The trusses were framed and assembled at the New York Central framing mill at Indianapolis and were shipped assembled, five to a car, in low gondolas to Bellefontaine.

Johns-Manville transite and Dickinson Ferrocast smoke jacks were installed. In addition, to provide better ventilation, large wood monitors 6 ft. wide and 16 ft. long project 6 ft. above the roof. These monitors are located between the smoke jacks and have adjustable louvres.

Drop-Pit Section

The five-stall drop-pit section of the enginehouse has a number of features that are different from the remainder of the enginehouse. It has a flat roof throughout, with a pitch of ¾-in. in 12-in., supported by concrete columns and wood beams except at points over the 50-ton and 100-ton drop pits, where the roof is supported by built-up flat, Pratt type, timber-connected trusses. The 50-ton drop table extends across two tracks and the 100 ton drop table extends across two other tracks. A monorail crane extends around the sides and back of this section of the enginehouse, serving the four drop-pit tracks and also the fifth track in this section of the enginehouse.

The drop-pit section extends out beyond the backwall of the remainder of the roundhouse from 45 to 22 ft. and in one angle formed by this projection are located the fan room, tool room and office. Immediately behind the drop-pit section and adjoining it are the new storehouse and a storage platform. The new machine shop, 60 ft. by 208 ft., is located just beyond the storage platform and connected to the drop-pit section by a short enclosed runway 16 ft. wide. A new grease room, 40 ft. by 30 ft., was built adjacent to the machine shop on the corner of this building farthest from the enginehouse.

The new store department building consists of half of an old structure and half new. The new portion is of brick and glass block construction similar to the enginehouse.

New Machine Shop

The machine shop has an exceptionally light roomy interior. To save time in designing, etc., a typical plan of another machine shop was used and adapted to the location. This building is of brick and glass block construction with a concrete foundation and floor. To save steel in its construction, it has exterior concrete buttresses at the pilasters and brick arch construction is used over the windows. The roof is supported by steel trusses and is of two-inch steel-bound T & G gypsum planks covered by built-up roofing. The roof has four clere story sections 34 ft. wide, extending transversely across the width of the building and 6 ft. above the level of the alternate lower roof sections. These clere story sections are enclosed with windows on both sides, providing additional light for the interior of the machine shop.

Along each side of the building are larger glass block windows, each being 10 ft. 6 in. wide. They vary in height, with two windows 13½ ft. high in the panels under each clere section of the roof and one window 7½ ft. high in the center of the intermediate panels. The smaller window areas are entirely of glass block, while each of the large windows has three pivoted sash across the lower part of the window area and glass block above. Two types of glass block are used; those up to 6 ft. above the floor level are a non-glare type and those above are a light-diffusion type. This is to avoid glare for men working near the windows.

Other new facilities constructed at Bellefontaine to replace those destroyed by fire include new well houses, a new pump and fan room and a new 30-ft. by 40-ft. water softener building. These facilities were similar to the others in design and construction. In addition, a cover was placed on one of the water storage tanks and a 300,000-gal. water storage tank was removed to a point between the other water tanks and the machine shop. This tank had formerly limited the length of three stalls in the enginehouse and its relocation permitted all the new stalls to be 130-ft. long.

As previously mentioned, the Walsh Construction Company, Davenport and New York, was the general contractor. Subcontractors included the Gesling Plumbing Company, Lancaster, Ohio; the Hatfield Electric Company, Indianapolis; and the Asbestos Roofing Corporation, Columbus, Ohio.

The work was done under the general supervision of E. H. McGovern, district engineer of the New York Central and W. C. Schakel, assistant engineer of structures, Cincinnati, Ohio. R. L. Geis, assistant engineer, buildings, was in charge in the field. Carl Randall was general superintendent and R. N. Kelly, general foreman for the contractor.

* * *

On Hand to Meet Every Train

This railroad canteen, at Evansville, Ind., open 24 hours a day, has served more than a million meals to servicemen since June, 1942, with the result it is frequently referred to as "their Indiana home." The canteen is operated by the Red Cross and is supported by public subscription from the Indiana-Illinois-Kentucky area.

Pullman Companies Ordered to Separate

A FINAL judgment handed down in the Pullman anti-trust suit by a three-judge Federal District Court at Philadelphia, Pa., on May 8, ordered Pullman, Inc., to separate its sleeping car business operated by its subsidiary, the Pullman Company, from its manufacturing business conducted by its subsidiary, the Pullman-Standard Car Manufacturing Company. "Pullman Incorporated shall," the decree states, "within 90 days after the effective date of this judgment file with the court its election to make such disposition either (a) of all its interest in the sleeping car business and the properties used in connection therewith, or (b) of all of its interest in the manufacturing business and the properties used in connection therewith, as will result in a complete separation of such businesses and the ownership and control thereof. At the same time Pullman Incorporated shall also submit to the Court for hearings and approval, a plan to effectuate such separation."

The final decree is the culmination of an anti-trust suit filed by the government against Pullman on July 20, 1940. It takes effect at the expiration of 60 days from May 8 unless within that time an appeal is taken, in which event it will take effect on the day on which the mandate of the Supreme Court is filed in the District Court at Philadelphia.

The decree directs Pullman, Inc., to carry out a plan of separation within one year. In the event such a plan has not been carried out within one year, the Court "will take such steps relative to the disposition of the business specified in the election made by Pullman, Inc."

The transfer of property, stock or bonds of the separated company for the purpose of control and interlocking directors are prohibited by the decree. From and after the separation, the Pullman Company cannot build new sleeping cars, nor engage in the business of manufacturing railroad passenger rolling stock and the Pullman-Standard Car Manufacturing Company cannot engage in the business of furnishing and servicing sleeping cars. Any orders or arrangements between Pullman and Standard for the construction of sleeping cars are unlawful except as to cars on which Standard has actually begun construction or has made commitments for material. For a period beginning with the effective date of the judgment and running until the separation, Pullman must ask for competitive bids when acquiring new sleeping cars.

Any orders or contracts between Standard and any railroads, whereby Standard is to build for the railroad passenger cars for use in any train in which Pullman is to operate sleeping cars, is subject to concellation at the option of the railroad within 60 days, except orders for cars on which construction has begun.

The decree gives contracting railroads the right to purchase used sleeping cars from the Pullman Company. The railroad must exercise the right to purchase within six months of the expiration of its sleeping car contract. Pullman cannot, without the prior consent of the Court, sell any used sleeping cars to any purchaser before the plan of separation is approved.

As long as Pullman continues in the sleeping car business, it must, at the request of any railroad offer, upon reasonable and non-discriminatory terms, to service railroad-owned sleeping cars, provided that the railroad-owned cars meet the safety standards of the Association of American Railroads. Likewise, it must furnish and service sleeping cars on any line of any railroad at the request of such railroad, to the extent that cars are available, even though sleeping cars are about to be or are being furnished on other lines of the same railroad by the railroad itself or by some third party. In addition, it must furnish on request but only to the extent that cars are available, cars to meet all or a part of the peak or seasonal demands for sleeping car accommodations, irrespective of whether or not a railroad has a contract with Pullman. The insertion or enforcement of an "exclusive right" clause is prohibited.

Any contract or understanding between Pullman and any railroad that is in force during all or any part of the period of time beginning one year from the effective date of the judgment and ending one year after the formal termination of the present war is subject to cancellation by such railroad at any time, provided that such railroad shall give to Pullman six months' notice of such cancellation. Such cancellation shall void the contract obligation, if any, of such railroad to buy the new-type lightweight cars furnished by Pullman to such railroad at its request upon the cancellation or termination of the contract.

In commenting upon the decree, David A. Crawford, president of Pullman, Inc., said:

"The decree is not a consent decree and either party may, as a matter of right, take an appeal from its provisions to the Supreme Court of the United States. What action the Pullman group of companies will take cannot be stated until we have had opportunity to make a thorough study and analysis of the effect of the provisions of the decree upon the conduct of our business.

"In addition to the direct impact of the decree upon the conduct of the sleeping car business, there would seem to be involved in this judgment some other matters of considerable public concern and interest. For example, we think this decree involves a limitation on the fundamental right of a contractor to make for himself the tools into which he puts his own money to perform his job. Of course, the Court's decision was based on its conclusion that Pullman was an illegal monopoly, but if the prohibition in this decree is extended in a broad way, it would seem to follow that no service institution that has been able to grow into general acceptance in its field by making for itself the tools best adapted for its trade, will hereafter be permitted to obtain the economies and score the technical advances made possible by such activities.

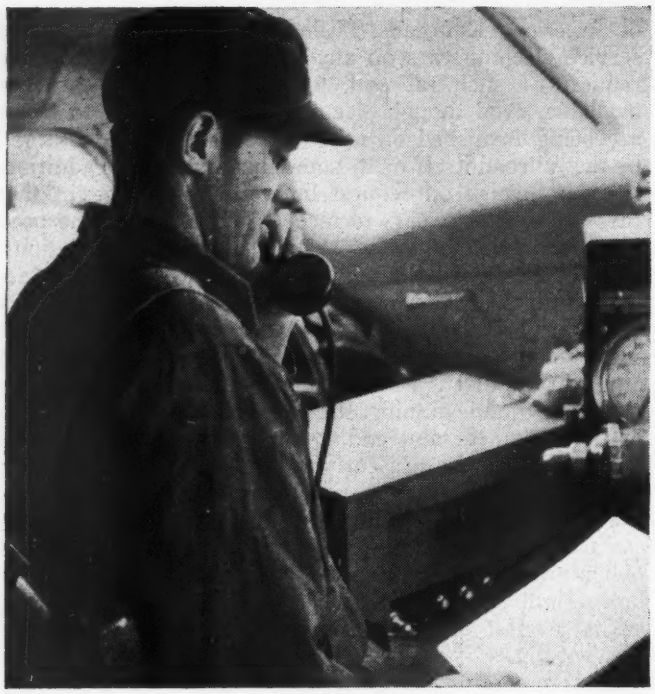
"Pullman's successful development of a sleeping car business serving the national interest has, to a very large extent, been made possible by the superior quality and economy of the equipment it has been able to design, construct and use in its service. The first all-steel sleeping car, the first closed vestibule, the first electric lighted train, the first air-conditioning installation, the first lightweight sleeper, and many other passenger-service 'firsts' have been pioneered by Pullman.

"There is also involved here the whole broad question of when, in the language of the court opinion, 'the sole possession of the field' is or is not in the public interest. The evidence in our case showed—and the court in its findings of fact handed down last April, 1943, so stated—that the Pullman Company 'did not at any time engage in predatory practices nor take any action to oppress or impede the business of any other sleeping car company'. The court recognized the efficiency and economy of our operation, in holding that each railroad must, as a practically desirable service feature, have access to a pool of sleeping cars such as Pullman operates because such a pool is economically advantageous to the railroads and 'is desirable in the public interest'. It held against us apparently because through the development of an efficient, economical and practical way, we became in a perfectly natural and inevitable way the only sleeping car company in the country—in 'sole possession of the field.'

"Yet the Congress of the United States, moving in precisely the opposite direction to that taken in the Court opinion, recently enacted, in the 'public interest,' legislation merging the only two remaining telegraph companies, leaving one in 'sole possession of the field'."

Rio Grande Tests Radio for Train Communication

Uses short-wave, frequency-modulation equipment for conversation between locomotive and caboose



The Fireman in the Cab of the Locomotive Uses the Telephone Equipment to Communicate with the Conductor in the Caboose

By W. W. Pulham

Superintendent of Communications, Denver & Rio Grande Western

THE Denver & Rio Grande Western has made tests of radio for communication between the locomotive and the caboose of a freight train on a 1,140-mile round trip between Denver, Colo., and Salt Lake City, Utah; tests were also made between the yard office and a switch engine in a yard at Roper, Utah, near Salt Lake City. The trip west from Denver to Salt Lake City was made on April 14 and 15, the yard tests at Roper were made April 16 and the return trip to Denver was completed on April 18.

These tests are a part of a program of the Rio Grande's research and testing laboratory. A year or more ago, E. A. West, general manager, directed Ray McBrain, engineer of standards and research, and A. S. Hunt, superintendent of communications, to study the possibilities of radio and electronics for communication between engine and caboose, from train to train, and between trains and the dispatcher. Mr. Hunt recently left the Rio Grande to become chief of communications on the Baltimore & Ohio, and was succeeded by the writer, while Ed Musgrove has been appointed electronics supervisor.

Type of Equipment

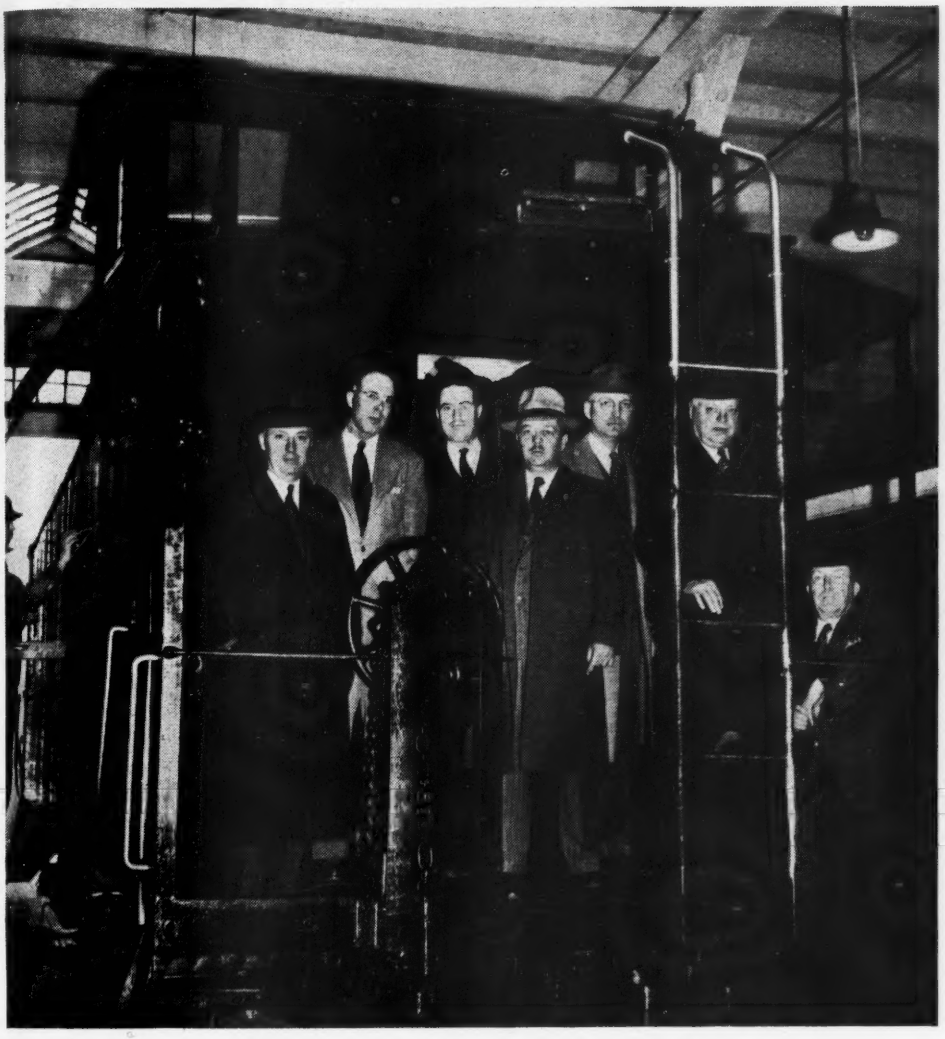
High-frequency, short-wave, frequency-modulation radio apparatus furnished by the General Electric Company was used on this test. The equipment is similar to but not exactly identical with that which has been manufactured and used extensively during the last two years in other fields. Each complete set of radio apparatus, designed for both sending and receiving, is mounted in a case about as large as a medium size home radio. The upper portion of one of these sets is shown to the left of the fireman seated in the cab of the diesel-electric freight locomotive used in the tests. In the caboose, the radio equipment was mounted in the cupola, as shown in a different illustration herewith. Whip-type antennas were mounted on the nose of the locomotive and on the rear platform of the caboose. The radio transmitters require an input of about 60 watts at 110 volts 60 cycle a-c. As a means for supplying this demand temporarily for this test, light-weight portable gas-engine driven generators were used, one being mounted in the locomotive and the other in the rear part of the caboose.

On the westward trip, the train consisted of about 70 cars, and on the return trip about 52 cars. Cars were set out and picked up at various points on the line. The route followed was over the Denver & Salt Lake via the Moffat Tunnel for 125 miles between Denver and Orestod, then via the D. & R. G. W., between Orestod and Salt Lake City. This route includes some 52 tunnels, rugged canyons, miles of desert, numerous curves with a few horseshoes, and much heavy grade up to 2 per cent. The top altitude is 9,300 ft. at the apex in the Moffat Tunnel, and the lowest is 4,080 ft. at Green River, Utah.

Uses for Train Communication

The radio-telephone equipment was continued in service throughout the road trips, so that the engineman and the conductor could carry on conversation at any time concerning matters having to do with the operation of the train. For example, the engineer and the conductor compared train orders by telephone. The engineer was advised by telephone when the rear brakeman had returned to the caboose after flagging or after closing switches. On one occasion, the engineer used the communication system to tell the conductor of a car which had developed a hot journal, and the conductor directed where to stop the train and set out the car. The rear brakeman left the caboose at once and proceeded over the tops of the cars, arriving at the car in question by the time the train had stopped, thus saving considerable time.

At another place on the trip, a brakeman noticed



View of the Caboose Photographed in the Shop

(Left to Right): W. W. Pulham, superintendent of communications, D. & R. G. W.; Fred I. Deetken, General Electric Co.; Ed Musgrove, electronics supervisor, D. & R. G. W.; F. M. Orsborn, General Electric; F. H. Doremus, General Electric; W. H. Sagstetter, chief mechanical officer, D. & R. G. W.; E. A. West, general manager, D. & R. G. W.

smoke coming from a wheel under the third car from the rear of the train. Using the telephone from the caboose, the engineer was told about the smoke, whereupon he acknowledged the information. He then made an application and release of the brakes, thus kicking off the sticking brake shoe, and thereby eliminating the trouble without perceptibly slowing the train. On the other hand, if the radio-telephone had not been in service, the conductor would have had no other choice but to try to attract the engineer's attention by flagging, or to pull the air for an emergency stop which might have resulted in pulling out a drawbar or other damage. Other situations in train operation were handled by radio-telephone which otherwise could have been solved only by hand signals, lantern signals or by stopping the train. Owing to the mountains, tunnels and curves, the communication was especially advantageous on this territory. Practically all of the "highballs" were given over the telephone, and were so acknowledged from the locomotive.

The radio reception and resultant telephone conversation between the two ends of the train was satisfactory at all places on the route, except when inside the 6.2-mile Moffat Tunnel under the continental divide. Here, Rio Grande technicians are planning to use a feeder aerial or a re-broadcast arrangement to provide correct operation when trains are in the tunnel.

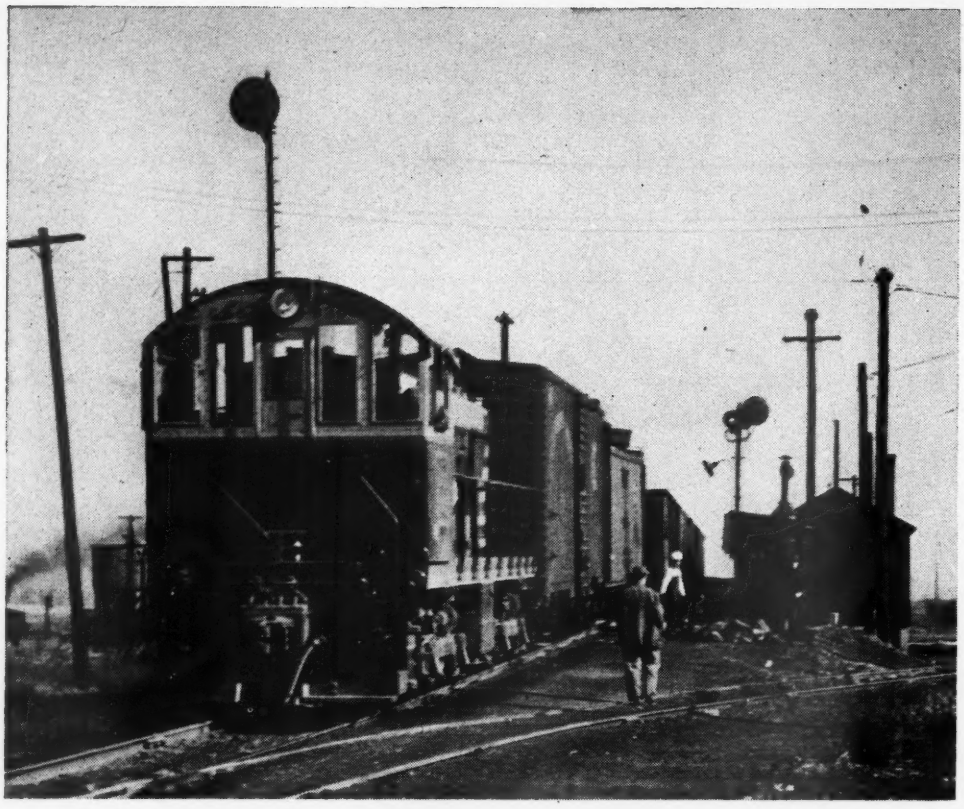
The Antenna Was Installed on the Head End of a Diesel-Electric Locomotive

During part of the time when the test trains were on the road, tests were made to determine the range of the apparatus for possible use between two or more trains or between trains and a wayside office. A radio set, including a receiver but no transmitter, was placed in an automobile, which was driven about near the city limits of Denver. The telephone conversation from the train was received satisfactorily in the automobile while the train was as far as 53 miles away.

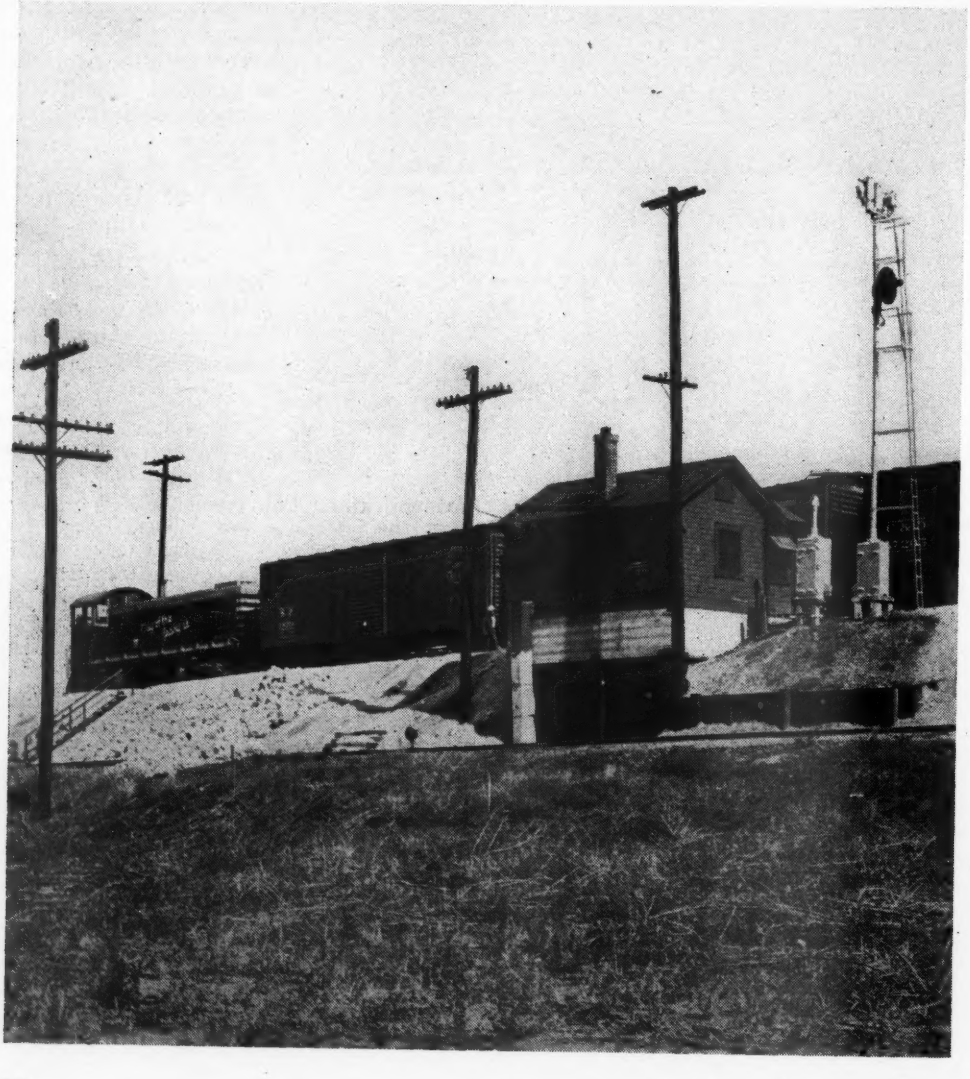
When making the tests in the freight yards at Roper on April 16, one of the radio sets was placed in the yard office, and the other radio equipment was transferred to a yard locomotive. Conversation was then conducted while making various switching moves, with satisfactory results.

The Communication Equipment Was Mounted in the Cupola of the Caboose

Diesel-Electrics as Hump Engines



The Last of a 65-Car Train Goes Over the East Yard Hump



A Diesel Working Over the Hump Which Serves Southbound Freight in the West Yard

AT Galesburg, Ill., the yards of the Chicago, Burlington & Quincy extend for approximately five miles and embody enough facilities to handle 10,000 cars every 24 hours. There are two hump classification yards. Six 1000-hp. Diesel-electric switching locomotives are used exclusively for the operation of these two yards, while steam locomotives handle passenger trains and industry cars.

All train movements in the sorting operations are controlled by radio between the locomotives and the hump office.

Each hump has a separate sorting yard and separate receiving and departing tracks. There are nine receiving tracks on the east hump and ten on the west, having capacities of 100 to 135 cars. The old hump serves the east yard, known locally as the "Rose Bowl," where there are 49 sorting tracks that hold from 17 to 35 cars each. In this yard all eastbound freight trains are made up. Until a little more than a year ago, only this

yard and one hump were in operation, and it was handling an average of 750,000 cars a year; 980,702 cars were humped in 1942. The total also includes the cars put over the new hump which went into service in November, 1942.

The new hump handles southbound freight in the west yard—the "Orange Bowl"—which has 35 sorting tracks of 17 to 35 cars capacity each. With both humps in 24-hour operation these yards average 900 cars over each hump in eight hours and handle 6500 to 7500 cars a day. The total number of cars handled in Galesburg yards last year was about 2 million, running approximately 30,000 cars a month more than in 1942. The peak month in 1943 was July, during which time 199,296 cars were handled.

The Burlington has used 1000-hp. Diesel-electric locomotives in hump service since December, 1942, and they have proved highly satisfactory in this work. The high available tractive force of the Diesels enables them to handle easily the trains which average 65 to 70 cars; many of them run from 90 to 100 cars. Locomotive No. 9300 once humped a 105-car train. By constant use of the flexible power of the Diesels, classification and dispatch of this heavy daily volume of freight is handled on, or ahead of, schedule. An average of six minutes per locomotive is saved, on each train that it is necessary to run around, as the Diesels work much faster than the steam locomotives they replaced. This means that a Diesel can hump up to 200 more cars in eight hours. The principal commodity through the classification yards is coal.

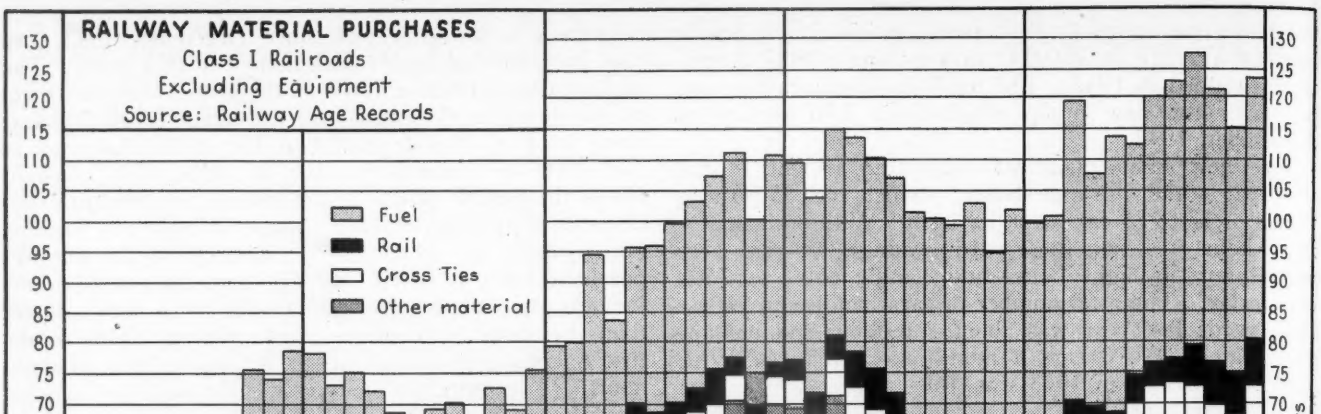
Track maintenance was formerly a big item. Because of the greater strain on the track caused by the use of heavy steam locomotives, it was necessary to gauge and otherwise recondition the track more often than is now required with Diesel operation.

Although the locomotives work on a 24-hour basis, the only maintenance is a scheduled eight-hour inspection once a week. They run 72 hours between fueling, the incidental needs being cared for at lunch period when necessary. Average availability is 96 per cent. The men like to work with the Diesel because they are clean and require little attention. The only operating difficulties experienced were caused by the cooling-water systems on some of the engines freezing during a severe cold wave last winter. No damage resulted, however.

There is no question but that these locomotives have improved the yard operations, and are economical at the same time. When the yard was operated with steam motive power, there was only one hump, but it was necessary to use five locomotives for hump pusher and drill service, each requiring five tons of coal per eight-hour shift. Fuel oil requirements of the Diesels are 64 gallons each per eight-hours, which results in a saving of $61,000 per year in fuel cost alone. There is no direct saving on steam locomotive facilities as they are maintained regularly for the road locomotives and the switchers used in industry work.

ABOVE—Retarder Operator's Position in Key Control Tower Where the Initial Switching Is Handled

BELOW—View of the East Yard from the Hump, Showing Floodlighting Towers and Retarder Control Towers



Purchases of Materials and Supplies (Excluding Equipment) By Class I Railroads 1939-1943.

Railway Buying Expanded in 1943

Purchases of materials and supplies largest since 1929 but equipment expenditures curbed by restrictions

RAILWAY purchases of fuel, materials and supplies, exclusive of new locomotives and cars, in 1943 totaled $1,432,115,000, an increase of $143,097,000 or approximately 10 per cent compared with 1942, according to a recent compilation of the purchases of Class I railroads of the United States by the Association of American Railroads and supplemental data based on reports to the *Railway Age* by short lines and switching and terminal companies.

Total purchases for all railroads included $889,069,000 of materials and supplies from manufacturers, which is the largest amount spent for these materials in any year since 1929. Supplementing these figures, fuel purchases reflected the tremendous increase in railway traffic and amounted to $543,046,000 an increase of 23 per cent over 1942.

The figures cited above include materials obtained by the railways to build new locomotives and cars in their own shops, but not the value of new equipment purchased from commercial builders, because of the lack of sufficient statistics. The cost of equipment, materials and machinery purchased by contractors for railway construction is not included, and neither do the figures include the expenditures railways make for heat, light, power and other utility services. Purchase figures are restricted to the railways of this country and hence do not reflect any purchases made in the United States by the railways of Canada, Mexico or other countries or territories of the United States. The figures also exclude all purchases by war agencies or military forces for building, rebuilding and operating railways in this and other countries. The purchase figures represent the delivered cost of materials received from commercial firms.

$410,803,000 for Iron and Steel Products

The purchase of fuel, materials and supplies by Class I railroads in 1943 totaled $1,394,281,000, an increase of $134,470,000 or 10.7 per cent compared with 1942 and greater than for any year since 1927 when they amounted to $1,395,928,000. Part of the increase over the 1942 total is accounted for by increased material prices, which averaged approximately seven per cent higher in 1943 than in 1942, and the remainder was accounted for by greater volume of purchases.

Purchases of iron and steel products, as a whole, re-

flected the severe restrictions imposed on these items, particularly during the first half of the year. Total purchases by Class I railroads amounted to $410,803,000, compared with $433,089,000 in 1942, a decrease of $22,286,000 or approximately five per cent. However, of the 23 classified items within this group, 10 showed increases ranging from 1.3 per cent to 23.2 per cent over 1942, and 13 showed decreases of 3 per cent to 33 per cent.

For locomotives and car castings, beams, couplers, frames and car roofs, Class I roads spent $49,440,000 in 1943 compared with $61,359,000, or 19.4 per cent less, in the preceding year. Expenditures for wheels, axles, and tires amounted to $44,550,000, compared with $41,501,000, an increase of 7.3 per cent over 1942. The reports also show larger purchases of bar iron and steel, spring steel, tool steel, unfabricated rolled shapes, wire netting and chain; boiler, firebox, tank and sheet iron and steel, which amounted to $28,868,000 compared with $27,120,000, an increase of 6.4 per cent over the year previous. Car forgings, iron and steel and fabricated or shaped steel for passenger and freight cars showed a sharp drop with total purchases of $11,367,000, or 33 per cent less than in 1942.

The railways obtained slightly more machinery and small machine tools than in the preceding year. Expenditures for machinery and repair parts, including all power machinery, totaled $4,383,000 compared with $4,066,000, an increase of 7.8 per cent over 1942; and purchases of small machine tools and hand tools, such as drills and taps, reamers, dies, chasers, including compressed air tools and parts amounted to $10,265,000 in 1943, compared with $10,107,000 in 1942.

Bolts, nuts, washers, rivets, lag screws, pins and studs bought by Class I roads amounted to $11,481,000 in 1943, compared with $13,452,00, or 14.7 per cent less than in the year before. Iron and steel pipe and fittings of all kinds also showed a slight reduction for 1943 purchases amounted to $7,118,000, compared with $7,642,000 in 1942. Standard and special appliances for locomotives purchased last year amounted to $18,478,000, compared with $18,730,000 in the previous year, and air brake material dropped from $25,363,000 in 1942 to $21,552,000, a decrease of 15 per cent, in 1943.

Purchases of forgings and pressed steel parts for locomotives totaled $3,414,000, compared with $4,514,000, a reduction of 24.4 per cent from 1942 figures. Flues and tubes for locomotives and stationary boilers in 1943 amounted to $6,450,000, a reduction of 3.4 per cent compared with the total of $6,674,000 the year before. On the other hand, purchases of helical and elliptical springs of all kinds for locomotives and cars increased from

Annual Purchases of Materials and Supplies Exclusive of Equipment

Class I Railroads

	Fuel (000)	Rail (000)	Cross Ties (000)	Other Material (000)	Total (000)	Total Less Fuel (000)
1929	$336,805	$88,735	$143,874	$759,186	$1,328,600	$991,795
1930	308,277	60,980	127,652	538,591	1,035,500	727,223
1931	244,500	41,500	44,000	365,000	695,000	450,500
1932	178,250	15,500	27,550	223,700	445,000	266,750
1933	179,150	10,650	19,750	248,200	457,750	278,600
1934	220,000	33,200	39,700	332,100	625,000	405,000
1935	232,400	20,354	33,780	306,593	593,127	360,727
1936	271,398	37,237	41,360	452,309	802,304	530,906
1937	293,540	44,935	58,361	562,100	958,936	665,396
1938	243,889	23,920	37,911	277,091	582,811	338,922
1939	257,880	38,340	39,760	434,394	770,374	512,494
1940	273,677	45,418	47,995	488,883	855,973	582,296
1941	349,848	52,311	50,039	710,831	1,163,029	813,181
1942	426,335	55,647	63,153	714,676	1,259,811	833,476
1943	527,296	60,074	83,402	723,509	1,394,281	866,985
			All Railroads			
1936	280,572	38,551	45,778	464,305	829,206	548,634
1937	303,200	45,700	61,578	579,544	990,022	686,822
1938	251,284	24,355	40,380	288,297	604,316	353,032
1939	269,352	39,390	43,075	453,309	805,126	535,774
1940	284,318	46,638	51,256	507,566	889,778	605,460
1941	365,048	52,961	53,978	735,785	1,207,772	842,724
1942	439,963	56,134	66,738	736,183	1,299,018	859,055
1943	543,046	60,678	86,832	741,559	1,432,115	889,069

Classified Purchases of Fuel, Material and Supplies (Equipment Excluded)

Class I Railways—1943 and 1942

Item	1943 In Thousands	1942 In Thousands	Per Cent Change
FUEL			
Bituminous coal	$375,398	$312,787	+20.0
Anthracite coal	3,715	3,090	+20.2
Fuel oil	136,905	99,767	+37.2
Gasoline	5,782	5,550	+ 4.1
All other (coke, wood, fuel for illumination)	5,496	5,141	+ 6.9
Total Fuel	$527,296	$426,335	+23.7
FOREST PRODUCTS			
Cross ties (treated and untreated)	$83,402	$63,153	+32.0
Switch and bridge ties (treated and untreated)	9,469	8,035	+17.8
Lumber, including timber (bridge and building, equipment, rough and finished lumber)	47,623	39,300	+21.2
Other forest products	9,761	4,739	+105.9
Total Forest Products	$150,255	$115,227	+30.3
IRON AND STEEL PRODUCTS			
Steel rail (new and second hand, except scrap)	$60,074	$55,647	+ 7.9
Wheels, axles and tires	44,550	41,501	+ 7.3
Frogs, switches and crossings and parts of same	22,919	16,978	+34.9
Track fastenings, track bolts, spikes, etc.	43,804	53,349	−17.9
Iron bridges, turntables and struct. steel, all kinds	3,827	3,183	+20.2
Bar iron and steel, spring steel, tool steel, unfabricated rolled shapes, wire netting and chain except light coil, boiler, firebox, tank and sheet iron and steel, all kinds	28,868	27,120	+ 6.4
Forgings and pressed steel parts for locomotives	3,414	4,514	−24.4
Car forgings, iron and steel and fabricated or shaped steel, for passenger and freight cars	11,367	16,963	−33.0
Flues and tubes for locos. and stationary boilers	6,450	6,674	− 3.4
Interlocking and signal material	18,152	21,245	−14.6
Telegraph, telephone and radio material	2,832	4,213	−32.8
Bolts, nuts, washers, rivets, lag screws, pins and studs	11,481	13,452	−14.7
Springs, helical and elliptical, all kinds for locomotives and cars	5,592	5,174	+ 8.1
Locomotive and car castings, beams, couplers, frames and car roofs	49,440	61,359	−19.4
Track and roadway tools, all kinds, miscellaneous track material and wire fencing. Motor, hand, push and velocipede cars and parts for same	8,440	9,174	− 8.0
Machinery and repair parts, including all power driven shop machinery	4,383	4,066	+ 7.8
Machinery, boilers, repair parts and all other iron and steel products	11,384	11,980	− 5.0
Pipe, iron and steel and fittings, all kinds	7,118	7,642	− 6.9
Hardware, all kinds, including nails	6,255	5,074	+23.2
Hand and small machine tools, such as drills, taps, reamers, dies, chasers, including air tools and parts	10,265	10,107	+ 1.5
Air brake material	21,552	25,363	−15.0
Standard and spec'l mechanical appliances for locos.	18,478	18,730	− 1.3
Automotive equipment and supplies	10,158	9,581	+ 6.0
Total Iron and Steel Products	$410,803	$433,089	− 5.1
MISCELLANEOUS			
Cement	3,026	2,889	+ 4.7
Lubricating oils and grease, illuminating oils, boiler compound, waste	30,468	26,102	+16.7
Non-ferrous metal and non-ferrous metal products	29,544	28,929	+ 2.1
Ballast	19,509	16,553	+17.8
All electrical material	19,783	20,055	− 1.3
Stationery and printing	20,258	19,727	+ 2.7
Commissary supplies for dining cars, camps and restaurants	56,417	39,938	+41.3
Rubber and leather goods	6,412	8,360	−23.3
Glass, drugs, chemicals, including chemicals for timber treatment, painters' supplies	38,852	39,617	− 1.9
Arch brick for locomotives	3,970	3,797	+ 4.5
Passenger car trimmings	7,631	9,341	−18.3
Locomotive, train and station supplies	22,463	16,192	+38.7
All other miscellaneous purchases	47,594	53,660	+11.3
Total Miscellaneous Purchases	$305,927	$285,160	+ 7.3
Grand Total	$1,394,281	$1,259,811	+10.7

Purchases by Individual Railroads in 1943 and 1942 Compared*

Railroad	Mileage	Total Purchases 1943	Total Purchases 1942	P. C. Change
A., C. & Y.	171	$714,283	$616,386	+15.8
Alton	959	6,771,961	5,867,927	+15.4
Alton & Sou.	32	504,555		
Ann Arbor	294	1,068,144	950,621	+12.4
A. T. & S. F.	13,147	75,753,324	64,178,338	+18.0
A. & W.P.-W.R. of Ala.-Ga.	555	4,143,449		
Atlanta, Birm. & Coast	639	1,537,078	1,404,877	+ 9.4
Atlantic Coast Line	4,966	26,590,032	22,903,784	+16.1
Baltimore & Ohio	6,382	59,497,324	53,377,695	+11.4
Bangor & Aroostook	597	1,439,068	1,430,220	+ 0.6
Bingham & Garfield	78	484,512		
Boston & Albany	362	4,414,851†	4,786,459	
Boston & Maine	1,825	14,347,070	12,937,175	+10.8
Burl.-Rock Island	228	251,984		
Cambria & Indiana	61	195,491	201,975	– 3.3
Central of Georgia	1,816	5,930,344	4,819,346	+23.0
Central R. R. of N. J.	692	11,265,800	11,207,521	+ 0.5
Central Vermont	422	2,088,833	1,853,555	+12.6
Charl. & West Carolina	343	875,432	995,719	–12.1
Chesapeake & Ohio	3,073	23,657,010	21,067,561	+12.3
Chi. & East Illinois	912	4,812,813	3,865,994	+24.5
Chicago & Illinois Midland	131	737,771	942,261	–21.7
Chi. & North Western	8,100	23,444,686	22,280,722	+ 5.2
Chicago, Burl. & Quincy	9,030	34,488,634	34,729,057	– 0.7
Chicago Great Western	1,500	5,198,039		
Chi., Ind. & Louisville	520	1,841,885	1,778,639	+ 3.5
Chi., Mil., St. P. & P.	10,761	30,503,071		
Chi., Rock Isl. & Pac.	7,751	29,932,747	24,144,671	+24.0
Chi., St. P., M. & O.	1,622	5,372,569	5,332,992	+ 0.7
Clinchfield	309	1,483,027	1,578,628	– 6.1
Colorado & Southern	748	3,048,662	1,988,923	+53.2
Colorado & Wyoming	42	340,702		
Columbus & Greenville	168	470,259	405,831	+15.8
Delaware & Hudson	848	9,624,324	9,268,118	+ 3.8
Del., Lack. & West	984	14,480,128	12,555,897	+15.3
Denver & Rio Gr. West	2,404	13,008,640	9,916,666	+31.1
Detroit & Mackinac	244	206,141	228,340	– 9.7
Det. & Toledo Sh. Line	50	341,232	382,466	–10.8
Detroit, Toledo & Ironton	464	1,201,423	1,132,580	+ 6.1
Dul., Mis. & Iron Range	544	4,341,511		
Duluth, S. S. & A.	535	824,140	778,338	+ 5.8
Elgin, Joliet & Eastern	392	4,057,768	3,736,372	+ 8.6
Erie	2,418	23,971,222	19,189,771	+24.9
Ft. Worth & Denver City	804	2,951,011	1,909,013	+54.5
Grand Trunk West	1,205	6,134,358		
Great Northern	8,125	33,225,489	31,477,169	+ 5.5
Green Bay Western	214	544,923	740,058	–26.4
Gulf, Mobile & Ohio	1,972	5,706,791	5,312,387	+ 7.4
Illinois Central	6,607	47,393,016	41,998,683	+12.8
Kansas City Southern	880	9,685,194	6,193,992	+56.4
Kansas City Terminal	170	1,367,335		
Lake Sup. & Ishpeming	156	215,647	303,023	–28.8
Lehigh & Hudson River	96	531,351	539,366	– 1.5
Lehigh & New England	190	777,914	778,590	– 0.1
Lehigh Valley	1,260	14,111,162	12,239,894	+15.3
Louisiana & Arkansas	852	4,945,180	2,945,790	+67.8
Louisville & Nashville	4,745	25,521,716	23,052,748	+10.7
Me. C. & Port. Ter.	991	3,421,095	3,757,453	– 9.0
Minneapolis & St. Louis	1,408	3,033,286	2,752,485	+10.2
Soo	4,277	7,914,627	7,622,905	+ 3.8
Mississippi Central	158	274,610	262,952	+ 4.4
Missouri & Arkansas	365	551,332	335,076	+64.5
Missouri-Kansas-Texas	3,293	16,368,226	12,176,296	+34.4
Missouri Pacific	9,985	48,276,003	46,181,015	+ 4.5
Monongahela	172	528,638	556,647	–15.0
Montour	51	419,282	366,810	+14.3
Nash., Chat. & St. L.	1,085	7,050,553	4,906,197	+43.7
Nevada Northern	165	312,578	293,089	+ 6.6
N. Y. Central System	10,766	117,461,363	102,039,352	+15.1
N. Y., Chi. & St. L.	1,688	15,102,195	12,301,801	+22.8
N. Y., N. H. & H.	1,838	22,843,517	22,653,484	+ 0.8
N. Y., Ont. & West	546	1,709,785	2,069,763	–17.4
N. Y., Sus. & Western	120	596,835		
Norfolk & Western	2,191	22,829,853	22,710,771	+ 0.5
Norfolk Southern	728	1,227,102	1,542,785	–20.5
Northern Pacific	6,868	23,857,303	22,680,080	+ 5.2
Northwestern Pacific	331	757,623	539,579	+40.4
Penn., L. I. & P. R. S. S.	10,901	129,275,723	125,592,977	+ 2.9
Pere Marquette	1,979	9,947,517	8,104,098	+22.7
Pittsburg & Shawmut	97	348,590	288,018	+21.0
Pitts., Shaw. & North	190	250,327	236,582	+ 5.8
Pitts. & West Virginia	136	990,719	1,218,891	–18.7
Reading	1,418	18,871,309	19,835,372	– 4.9
Rich., Fred. & Potomac	118	4,700,549	4,051,408	+16.0
Rutland	407	894,323	962,487	– 7.1
St. Louis-San Fran.	4,946	21,183,455	14,962,602	+41.6
St. Louis Southwestern	1,617	8,980,336		
Seaboard A. L.	4,178	23,856,882	20,987,230	+13.7
Southern	7,700	50,917,627	42,160,399	+20.8
Southern Pacific (Pac.)	8,309	66,389,381	59,009,154	+12.5
Spokane International	157	384,326		
Spok., Port. & Seattle	947	4,174,985	3,563,910	+17.1
Tennessee Central	286	1,056,773	1,036,104	+ 1.9
T. R. R. A.	463	2,678,054		
Texas & New Orleans	4,341	16,455,480	13,986,840	+17.6
Texas & Pacific	1,903	13,085,735	10,025,424	+30.5
Toledo, Peoria & West	239	404,039	361,865	+11.6
Union Pacific	9,817	76,217,286	73,476,405	+ 3.7
Utah	111	182,725	164,359	+11.2
Virginian	657	5,202,341	6,672,712	–22.0
Wabash	2,381	12,866,029	13,429,594	– 4.2
Western Maryland	842	5,770,943	5,558,775	+ 3.8
Western Pacific	1,195	7,012,728	6,145,298	+14.1
Wheeling & Lake Erie	507	3,224,125	3,536,314	– 8.8

* Data not available where spaces left blank.

† Rail and crossties included in New York Central.

$5,174,000 in 1942 to $5,592,000 or approximately 8 per cent.

Lubricants, boiler compounds; arch brick for locomotives; locomotive, train and station supplies; and commissary supplies all showed sharp increases in the quantities purchased and reflected the upward trend of freight and passenger traffic. The total purchases of lubricating oils and grease, illuminating oils, boiler compounds and

Purchases From Commercial Firms by Short Lines Switching and Terminal Companies in 1943*

	Fuel	Rail (new)	Cross ties	Other Material	Total
Ak. & Barb. B.	$37,363	$....	$14,113	$55,229	$106,705
Al. & So.	123,568	14,676	8,553	139,075	285,872
Alleg. & So. Side	6,359	....	....	6,852	13,211
Atl. & St. A. Bay	108,651	....	112,712	183,299	850,755[1]
Atl. & Yad.	64,717	....	91,187	30,795	186,699
Bath & H'port	3,058	....	3,110	1,651	7,819
Baux. & No.	33,115	....	5,220	22,765	61,947[2]
Belf. & M'hd Lake	21,648	....	2,224	2,162	26,034
Birm. So.	50,080	2,092	9,101	191,026	252,299
Buf. Cr. & Gau.	20,056	....	27,800	42,200	90,056
Carrollton	3,535	....	....	2,035	5,570
Chatt. Val.	20,207	....	21,935	3,112	45,254
Chi., At. & So.	6,980	....	....	2,300	9,280
Cin. Un. T.	273,884	....	52,559	601,157	928,503[3]
Clar. & Pit.	11,895	253	10,319	3,729	26,196
Col., Newb. & L.	50,689	....	37,917	35,241	123,847
Dansy & Mt. Mor.	4,231	....	51	7,456	11,738
D. M. Un.	78,741	....	14,938	47,148	140,827
Det. Term.	100,017	....	....	37,767	137,784
Dul. & N. E.	11,486	....	1,504	7,587	20,877[4]
Dur. & So.	33,902	....	46,769	36,867	117,538
East Broad Top	23,643	....	4,602	43,442	71,687
East Erie	2,029	....	....	.....	2,029
East Jersey	9,217	....	1,305	2,710	13,232
Fl'bg & No.	1,566	....	1,420	600	3,586
F't & Cin.	9,113	....	3,549	22,672	35,334
Gal., H. & Hend.	27,467	10,668	9,136	96,450	143,721
G. W. (Denver)	18,000	....	....	18,000	36,000
G'ville & No.	3,636	....	6,476	2,479	12,591
H. P.-Tho. & Dent.	19,487	....	16,420	9,750	45,657
Ironton	8,206	....	5,399	1,389	14,994
Jack. Term.	124,557	6,608	9,747	357,258	498,170
J'town & St. Cr.	3,572	....	4,512	11,891	19,975
Ken. & Tenn.	22,169	5,817	5,841	6,000	39,827
L. Sup. Term. & Tr.	72,444	....	2,785	12,687	87,916
Ligonier Valley	9,656	....	10,942	7,008	27,606
L'view Port. & No.	42,029	....	2,577	56,225	156,552[5]
L'ville & Wad.	2,290	....	2,509	.....	4,799
Lowv. & Beav. R.	3,650	....	438	240	4,328
Md. & Pa.	53,300	12,785	17,945	41,427	125,457
Midland Terminal	35,425	....	3,342	15,413	54,180
Minnesota Transfer	92,503	....	735	116,693	209,931
Miss. Exp.	6,352	....	19,764	.....	26,116
Morehead & No. F.	1,600	....	1,660	3,912	7,172
N. Y. & Long Br.	9,369	88,130	....	123,778	221,277
No. La. & G.	11,764	....	23,868	15,339	50,971
N. E. Okla.	16,045	....	19,826	79,055	174,477[6]
N. P. Term. (Ore.)	162,197	....	28,907	224,776	660,053[7]
Pacific Coast	34,000	6,800	14,500	25,000	80,300
P., Al. & McK. R.	7,474	....	939	5,659	14,072
P., Chart. & Y.	230	8,176	....	5,459	15,429[8]
Pt. H. & Det.	22,608	....	....	11,200	33,808
Port. Town. So.	....	....	4,111	4,246	8,357
Pres. & N. W.	4,595	....	14,443	2,500	21,538
Pullman	5,480	....	21,668	38,348	65,496
Quan., A. & P.	87,664	....	21,241	24,826	133,731
Rahway Valley	9,046	....	363	4,899	14,308
Riv. Term.	123,758	12,254	13,437	91,815	241,264
St. J. Belt.	9,720	....	....	.....	9,720
St. L. & Hann.	8,932	....	2,978	2,405	14,315
St. L. & Troy	817	....	661	1,539	3,017
Sierra	12,833	....	847	33,482	47,162
Sioux C. Term.	21,755	....	8,234	9,933	39,922
So. Omaha Term.	43,119	....	1,435	15,449	60,003
Sylvania	4,390	....	....	.....	4,390
Term. Ry. Ala.-State D.	37,893	....	9,041	34,092	81,026
Tol. Term.	111,991	17,001	29,509	70,272	228,773
Trona	55,567	....	2,281	23,398	81,246
Tuskegee	2,873	....	1,575	1,575	6,023
Un. Term.	13,042	....	5,696	28,448	47,186
Union	990,503	27,594	12,251	929,503	2,355,913[9]
Unity	4,334	....	....	3,854	9,633[10]
Verde Tun. & Sm.	20,081	....	4,794	26,979	51,854
Wad. So.	4,867	....	2,644	.....	7,511
West. Alle.	15,176	....	1,025	3,602	19,803
Winch. & Wes.	5,089	....	3,189	.....	8,278
W. S. S'bound	51,085	....	47,771	17,059	115,915
W. & Tennile	14,385	....	3,645	2,957	20,987
Y'town & No.	67,752	....	....	93,791	161,543
ELECTRIC RAILROADS					
Denv. & Int.	....	....	3,567	7,973	11,540
Ok. City Jc.	....	....	1,746	3,734	5,480
Pac. Elec.	403,000	....	333,000	1,182,000	2,102,959[11]
Pied. & No.	2,475	36,595	31,947	211,997	285,050[12]

* None purchased where spaces left blank

Total includes equipment as follows: [1] $1,574 highway vehicles, $444,519 locomotives and cars; [2] $847 highway vehicles; [3] $903 highway vehicles; [4] $300 highway vehicles; [5] $55,721 locomotives and cars; [6] $5,409 highway vehicles, $54,142 locomotives and cars; [7] $677 highway vehicles, $243,496 locomotives and cars; [8] $1,564 highway vehicles; [9] $1,045 highway vehicles, $395,017 locomotives and cars; [10] $1,445 highway vehicles; [11] $105,834 highway vehicles, $79,125 locomotives and cars; [12] $2,036 highway vehicles.

Gross Capital Expenditures* (in Thousands) on Railway Property—1939 to 1943†

Class I Railways—United States

Item	1943	1942	1941	1940	1939
EQUIPMENT:					
Locomotives	$142,070	$113,834	$80,607	$54,351	$42,807
Freight-train cars	97,890	201,112	245,713	189,629	66,779
Passenger-train cars	5,828	24,075	29,544	18,417	19,723
Other equipment	10,193	10,353	11,704	9,509	4,079
Total Equipment	$255,981	$349,374	$367,568	$271,906	$133,388
ROADWAY AND STRUCTURES:					
Additional main track*	$18,493	$6,235	$3,781	$3,385	$3,308
Yards and sidings	39,254	43,330	25,374	14,233	10,459
Heavier rail	32,227	33,100	36,108	30,473	26,389
Additional ballast	6,229	5,487	5,635	4,994	4,342
Shops and engine houses**	15,615	13,623	13,920	11,074	9,378
Station and office buildings and other station facilities	10,320	10,623	11,251	7,891	8,741
Bridges, trestles and culverts	20,673	21,471	19,419	22,596	21,196
Signals and interlockers, including telephone and telegraph lines, automatic train control, etc.	16,041	16,261	13,439	10,275	6,741
All other improvements	39,449	35,393	46,526	52,320	38,087
Total Roadway and Structures	$198,301	$185,523	$175,453	$157,241	$128,641
Grand Total	$454,282	$534,897	$543,021	$429,147	$262,029

* Includes rail and tie fastenings and other track material.
** Includes machinery and tools.
† As compiled by Association of American Railroads.

waste by Class I roads in 1943 amounted to $30,468,000, an increase of 16.7 per cent compared with $26,162,000 in 1942. Purchases of arch brick for locomotives aggregated $3,970,000, compared with $3,797,000, an increase of $173,000 over 1942. Expenditures for locomotive, train and station supplies totaled $22,463,000, an increase of 38.7 per cent compared with $16,192,000, in the preceding year; while commissary supplies bought for dining cars, camps and restaurants amounted to $56,417,000, an increase of 41.3 per cent compared with 1942.

$255,981,000 for Equipment

Although the foregoing figures include the cost of materials obtained by the railways to build new locomotives and cars in their own shops, they do not include the value of new equipment purchased from commercial builders, because of the lack of adequate data. However, as a measure of expenditures for new equipment and improvements to equipment in service, the Association of American Railroads announced recently that capital expenditures made by Class I railroads in 1943 for these purposes amounted to $255,981,000, a reduction of $93,393,000, or 26 per cent, compared with similar expenditures in 1942, 30 per cent less than in 1941 and about 6 per cent less than in 1940.

This reduction was due principally to the inability to obtain materials for new freight and passenger cars. Capital expenditures for freight-train cars were 51 per cent less than in 1942, 60 per cent less than in 1941, and almost 48 per cent less than in 1940. Expenditures for passenger equipment were almost 76 per cent less than in the preceding year, 80 per cent less than in 1941 and 68 per cent less than in 1940. On the other hand, 1943 expenditures for locomotives were greater than in any year since 1923, 25 per cent greater than in 1942, 76 per cent more than in 1941, 162 per cent more than in 1940 and 232 per cent more than in 1939.

Capital expenditures for locomotives in 1943 totaled $142,070,000, compared with $113,834,000 in the preceding year, $80,607,000 in 1941, $54,351,000 in 1940, $42,807,000 in 1939 and $208,966,000 in 1923.

Although capital expenditures for freight-train cars in 1943 were less than in any of the preceding three years, they amounted to $97,890,000, which represents an increase of $31,111,000 over similar expenditures in 1939.

Total capital expenditures for passenger-train cars dropped to the cellar in 1943, when the Class I roads spent only $5,828,000, which is considerably less than the amount spent for such purposes in any of the preceding nine years. In 1942 these expenditures totaled $24,075,000; they were $29,544,000 in 1941, $18,417,000 in 1940 and $19,723,000, in 1939. For other equipment, expenditures last year amounted to $10,193,000 compared with $10,353,000 in 1942, $11,704,000 in 1941, $9,509,000 in 1940 and $4,079,000 in 1939.

Purchases of steel rails, including new and second-hand, by the Class I railroads in 1943, amounted to $60,074,000, compared with $55,647,000, or an increase of 7.9 per cent over 1942. For track fastenings, track bolts, spikes and other such materials used for laying rails, the railways expended $43,804,000, compared with $53,349,000, or 17.9 per cent less than in 1942. They also bought $22,919,000 of frogs, switches and crossings and parts, or almost 35 per cent more than the $16,978,000 spent for similar materials in the previous year. Expenditures for track and roadway tools; miscellaneous track materials; wire fencing; motor, hand and push cars and parts in 1943 totaled $8,440,000, or 8 per cent less than the $9,174,000 spent for these items in 1942.

Signal Materials

The roads spent $18,152,000 for interlocking and signal material, or 14.6 per cent less than the $21,245,000 expended for similar items the year before. Telegraph, telephone and radio material expenditures amounted to $2,832,000, or $1,381,000 less than in 1942, and $19,783,000 of electrical materials compared with $20,055,000 in the previous year.

In 1943 the roads received $3,827,000 of iron and steel bridges and turntables and structural steel, or 20.2 per cent more than in 1942; $6,255,000 of hardware of all kinds, including nails, or 23.2 per cent more than the year before; $3,026,000 of cement, compared with $2,889,000 in 1942; and $38,852,000 of glass, drugs, chemicals, including chemicals for timber treatment, and painters' supplies, or $765,000 less than in the previous year.

$150,255,000 Purchases of Forest Products

Forest products bought by the Class I roads amounted to $150,255,000 in 1943 compared with $115,227,000, or an increase of 30.3 per cent over 1942. Treated and untreated cross ties amounted to $83,402,000, or an increase of 32 per cent compared with $63,153,000 spent in 1942. Treated and untreated bridge ties amounted to $9,469,000, an increase of 17.8 per cent over the previous

Gross Capital Expenditures (in Thousands) on Railway Property—1943*

Class I Railways—United States

Item	Unexpended authorizations brought over from 1942 A	Additional authorizations during year 1943 B	Total amount authorized including carry-over from 1942 C = A + B	Amount expended during year 1943 D	Carry-over of unexpended authorizations to 1944 E = C − D
EQUIPMENT:					
Locomotives	$83,209	$192,178	$275,387	$142,070	$133,317
Freight-train cars	49,354	120,036	169,390	97,890	71,500
Passenger-train cars	6,136	4,263	10,399	5,828	4,571
Other equipment	5,931	9,797	15,728	10,193	5,535
Total Equipment	$144,630	$326,274	$470,904	$255,981	$214,923
ROADWAY AND STRUCTURES:					
Additional main track	8,801	26,351	35,152	18,493	16,659
Yards and sidings	19,978	45,648	65,626	39,254	26,372
Heavier rail	8,187	49,170	57,357	32,227	25,130
Additional ballast	2,069	7,204	9,273	6,229	3,044
Shops and engine houses (including machinery and tools)	9,361	18,735	28,096	15,615	12,481
Station and office buildings and other station facilities	3,289	15,979	19,268	10,320	8,948
Bridges, trestles and culverts	19,193	27,132	46,325	20,673	25,652
Signals and interlockers, including telephone and telegraph lines, automatic train control, etc.	11,896	23,083	34,979	16,041	18,938
All other improvements	40,444	46,409	86,853	39,449	47,404
Total Roadway and Structures	$123,218	$259,711	$382,929	$198,301	$184,628
Grand Total	$267,848	$585,985	$853,833	$454,282	$399,551

* As compiled by Association of American Railroads.

year; while lumber and timber purchases totaled $47,263,000, an increase of 21.2 per cent compared with expenditures for similar items in 1942.

Since the purchase figures in this article do not include materials, machinery and supplies purchased by contractors for additions and improvements to railway properties, the following resume of a recent announcement by the Association of American Railroads, of gross capital expenditures on railway property of Class I roads for 1943 indicates the magnitude of this work and the value of the materials involved. Capital expenditures for roadway and structures last year totaled $198,301,000, an increase of $12,778,000, or 7 per cent, more than in 1942, 13 per cent larger than in 1941, 26 per cent greater than in 1940 and 54 per cent more than in 1939.

Approximately half the 1943 expenditure of $198,301,000 was spent for the improvement of tracks and sidings. For additional tracks, capital expenditures totaled $18,493,000 or nearly three times the amount spent for that purpose in 1942. Expenditures in 1943 for yards and sidings totaled $39,254,000, compared with $43,330,000 in the preceding year, and for heavier rail the road spent $32,227,000, a decrease of $873,000 compared with 1942. In addition, the railroads spent $6,229,000 for ballast in 1943, compared with $5,487,000 in 1942, $5,635,000 in 1941 and $4,994,000 in 1940.

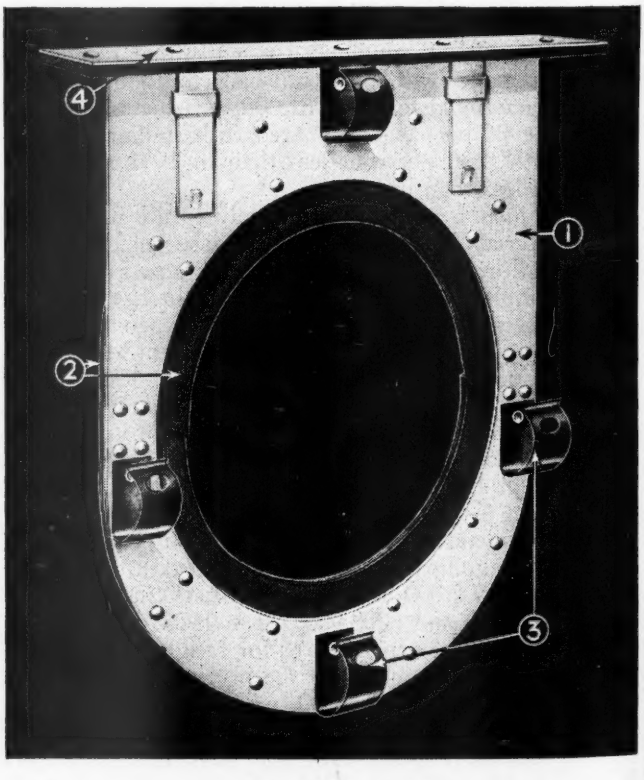
Bridges, trestles and culverts were improved at a total cost of $20,673,000. Expenditures for shops and enginehouses amounted to $15,615,000, an increase of $1,992,000 compared with 1942, while the $10,320,000 total for stations, office buildings and other station facilities was slightly less than the amount spent for that purpose during the preceding year. Total capital expenditures for signals and interlockers, including telephone and telegraph lines and automatic train control were $16,041,000, a dip of $220,000 below similar expenditures in 1942.

Fuel purchases by the Class I roads in 1943 totaled $527,296,000, compared with $426,335,000 in 1942. For bituminous coal only, their purchases amounted to $375,398,000, or an increase of $62,611,000 compared with the preceding year, while anthracite coal purchases of $3,715,000 were $625,000 more than in 1942. Fuel oil purchases amounted to $136,905,000, compared with $99,767,000 in the preceding year. The expenditure for gasoline was $5,782,000 in 1943, while for all other fuels including coke, wood, and fuel for illumination, expenditures amounted to $5,496,000.

Statite Dust Guard

A DUST GUARD, known as the Statite, recently placed on the market by the Lubrication Products Company, Cleveland, Ohio, is said to give positive protection against the infiltration of water and dirt into journal boxes and to prevent the loss of oil from the box.

This dust guard consists of a sturdy frame *1*, or backbone, made of heavy-gage steel designed to withstand any pressures which may be placed on it, including jacking the journal box when frozen. The laminated gasket *2*, made of two layers of high-grade wool vulcanized to a layer of oil-and-water proof Neoprene, serves as a close-hugging, free-sliding gasket or collar



Statite Dust Guard

on the journal. It also serves as a soft cushioning gasket which forms a seal against the relatively rough cast-iron surface of the dust-guard well.

The spring *3* hold the entire assembly in place and exert sufficient force to hold the gasket tightly against the face of the dust-guard well. The adjustable top *4*, with its soft felt gasket, slides up and down so that it can be tightly and firmly closed against the top edges of the well when the dust guard is installed but at the same time can be used as a handle, when removing the assembly, by lifting up to the limit of its guides.

The Statite dust guard is easy to install and is made in standard sizes to fit all standard A. A. R. journal boxes. The gasket material is said to have been used as oil seals on roller and ball bearings for several years where it showed no deterioration from contact with either oil or water and gave reliable service over a long period.

Communication . . .

The Post-war Challenge

ANN ARBOR, MICH.

TO THE EDITOR:

Thoughtful readers of *Railway Age* will have noticed in recent months evidence of a growing feeling of complacency on the part of certain analysts with regard to present and post-war railway operation. The following excerpts summarize nicely the general theme of several articles typically expressive of this attitude. "Never before have the railways so thoroughly and so unanimously and so hopefully looked scientifically at their problems. . . ." "Most railroad men who are familiar with passenger traffic are not unluly alarmed at the railways' post-war prospects for retaining and adding to their participation in this class of business. . . ."

It is to be hoped that these smug statements do not reflect the attitude of the majority of railway executives. The vigor and resourcefulness of truck and bus operators have already been demonstrated, and competition from the airlines may be confidently anticipated on a scale not even dreamed of before the war.

In a series of stimulating articles on the future of air transport appearing recently in the "Atlantic," such recognized authorities as Masefield, Burden and Loening present some startling facts. Their conclusions, even when heavily discounted for bias, are such as to merit most serious and respectful consideration. Loening points out that applications are now on file with the Civil Aeronautics Board for approval of over 500,000 miles of new air routes. The portion confined within our national boundaries is not stated, but even if this fraction were no more than 50 per cent it would equal the route-miles of the Class I carriers. The same writer predicts that cargo-carrying gliders, so strongly built that 60 per cent of their total weight can be pay-load, will soon be in common use. Burden notes that in 1939 there were only 8 transport planes in the entire world capable of making a 2000-mile non-stop flight with significant pay-load, whereas such transport craft are now being built for military service at the rate of 15,000 a year. He reminds us that over 2,000,000 Americans are in our Air Force, many of whom will hope to make peacetime careers in aviation.

When the full inpact of this competition begins to be felt it will strike the railways in several vital spots. The trucks and buses will resume their quick jabs below the belt, taking much of the short-haul passenger and freight business, while the airlines will deliver a staggering blow to the chin with their bid for the long-haul Pullman and streamliner passengers and the lucrative preference freight.

The countermeasures most likely to bring success are those which have already proved their worth: rate reductions strategically applied; profound improvement in the quality, frequency and completeness of service; greater emphasis on comfort and safety. It will be apparent that these devices for retaining and augmenting traffic cannot be put into effect to the degree necessary to insure their success without being preceded or accompanied by significant reductions in operating and maintenance costs and fixed charges. This too in the face of the inflationary period sure to follow the war, with its attending high prices for essential materials.

One thing is certain. There is immediate need for engineering skill of the highest order. Every phase of railway operation down to the smallest detail must be critically scrutinized; new technics must be developed, new materials and methods utilized. If the railways fail in their efforts to meet this challenge it will be due in part to an inherent weakness in organization. With but few exceptions their engineering staffs have not been permitted and encouraged to keep pace with the rapid-fire developments in applied science. They have relied to a large degree upon the various railway equipment companies to do their engineering and development work for them. They have "farmed out" some research problems to a few universities with commendable results and have some research committees composed largely of executives already burdened with operating responsibilities, but on the whole their research activities when compared with typical progressive industrial concerns are insignificant. They have been overly inclined to introduce innovations reluctantly, under pressure from the I. C. C. or the public.

In this latter respect a resonable amount of skepticism toward new technics and a conservative policy with regard to changes in operating and maintenance methods are highly commendable in so far as they enhance the railways' enviable record for safety and reliability. Unfortunately the borderline between conservatism and mental inertia is not sharply defined and there are occasions when one suspects that too many railway executives are characterized by the latter. It is hard to explain in any other way the failure to provide a simple warning device, perhaps in the form of bimetal thermocouples installed in the journals of all passenger cars regularly used in limited trains, which would flash a warning signal in the locomotive cab before a hot box reaches the dangerous stage.

A similar case in point is the fact that in 1932 the published results of a scientific stress analysis of various rail sections, by two prominent engineers, showed that a slight change in web thickness would add appreciably to rail strength. Yet only within the last year or two have railway engineers showed any tendency to investigate this recommendation and carry out road tests on sections rolled to the new specifications. There is need for better methods of detecting rail fissures and other forms of incipient defects. The detector cars now coming into use represent an important advance in testing technic but their most staunch admirers will be the last to claim that these devices are incapable of being still further improved.

Other Technological Opportunities

The remarkable mechanisms that are being employed as tank turret stabilizers can without doubt be adapted to eliminate nearly all of the sway and bounce of the rolling stock assigned to luxury trains. Electronic devices have only begun to demonstrate their versatility in the fields of signalling, motor control, high-frequency heating, welding and numerous other railway applications. In short, railway engineers can well afford to consider whether a considerable broadening of their horizon would not be beneficial.

As a step in this direction a definite policy of recruiting and training young graduates of the better technical colleges should be instituted on a much larger scale than heretofore. Ambitious youngsters who have been drilled in engineering fundamentals can bring their enthusiasm, their quickness of perception, their habits of intensive study, their belief in the efficacy of modern methods of research, to bear on the engineering problems of the railways. Some should have had background courses in electronics; others in metallurgy, in servo-mechanisms, machine design, high-frequency heating, and a score of similar subjects bearing directly or indirectly on railway engineering problems. Of course they will need practical experience; they will need a guiding and restraining hand for a time; but youngsters of this sort have proved their worth to the large manufacturing industries, the telephone and power companies, and they can do the same for the railways if given the opportunity. This one step should go far toward preparing the railways to meet the post-war challenge.

HEMPSTEAD S. BULL

Department of Electrical Engineering, University of Michigan.

Railroads-in-War News

Railroad Men Win High Safety Honors

Carriers top other industries in "Safety Ace" awards to its employees

In contrast to the showing made by other industries, the railroads have supplied 15 per cent of the "Safety Aces" selected by the National Safety Council for the program "Men, Machines and Victory" broadcast over the Blue Network since January 15, 1943. This is at the rate of one man for each 11 of the 170 railroad members, compared with one man for each 106 of the 5,830 industry members.

To encourage safety in industry and aid the war effort, the National Safety Council has, since the beginning of 1943, encouraged its 6,000 members to enter in a contest those of their employees who are not supervisors of safety but who, because of their interest in safety might qualify as "Safety Aces." Judges selected by the Council review the qualifications submitted and elect the Safety Aces. Each week one of the Aces selected is given a $100 war bond at ceremonies held at his shop and is interviewed on the radio.

Since January 15, 1943, 65 Aces have been selected, of whom 10 have been railroad employees. Of the 6,000 companies that are members of the Council, only 170 are railroads.

A study of the records of the 10 railroad employees reflects, not only a personal interest in the practice of safety, but an inventive genius for safety aids born of a desire to remove the causes of accidents and be helpful to fellow workers. The 10 railroad aces selected to date are as follows:

Ronald F. Olds, February 26, 1943, lead sheet metal worker on the Missouri Pacific at North Little Rock, Ark. Encouraged the use of safety shoes and prevailed upon workers to realize the danger of grease-saturated clothing in welding operations.

George Gibson, March 30, 1943, supervisor of the woodmill of the Pullman Company at Pullman, Ill. Invented several guards for wood working machines. His department operated 13 years and 170 days without a lost time accident.

George Snyder, April 13, 1943, of the air brake department of the Great Northern at Spokane, Wash. Designed devices which reduced the hazard of handling couplers and hanging doors.

Stanley LeGrande, June 22, 1943, a millman on the Illinois Central at Mattoon, Ill. Displayed special interest in safety and devised several devices for preventing accidents on machines.

E. L. Burton, July 20, 1943, foreman for the Atchison, Topeka & Santa Fe at Bakersfield, Cal. Devised wheel truck benches, a safety angle lug for locomotive oil tank manhole covers and a device for holding in place the deck on locomotive cabs and thereby reduced accident hazards.

George Traus, August 30, 1943, machinist leader in the Sayre locomotive shops of the Lehigh Valley at Bethlehem, Pa. Devised an eye shield and metal guards for planers and saws and a portable folding curtain for welding operations which envelops the welder and shields the flash for other welders.

Kenneth Glasmann, September 20, 1943, tank truck foreman in the Denver, Colo., shops of the Union Pacific. Designed a split window for locomotive cabs to eliminate exposure to drafts, several safety devices for shops, and ventilation for welding.

Martin C. Petersen, November 22, 1943, assistant enginehouse foreman on the Union Pacific at Green River, Wyo. Had a long record for conducting safety meetings successfully and perfected several devices for preventing accidents in shops.

John J. Lang, November 29, 1943, locomotive engineman on the New York, New Haven & Hartford at New Haven, Conn. Had an excellent record of performance as an engineman and on three specific occasions showed rare judgment which prevented possible serious train accidents.

W. E. Buck, January 24, 1944, locomotive shop superintendent on the Michigan Central at Jackson, Mich. Was especially active in preventing injuries and deaths among fellow workers. In the seven years, 1937 to 1943, in which he was general foreman or superintendent, the casualty rate per million man-hours worked for his department, averaged 3.60 while in one year it was zero.

O. D. T. Organizes Intercity Bus Industry Committee

Eleven representatives of the intercity bus industry have been appointed by the Office of Defense Transportation to form an Intercity Bus Industry Advisory Committee, acting in an advisory capacity to Assistant Director Guy A. Richardson.

Four of the 11 members are officers of railroad affiliates, as follows: I. B. James, president, Burlington Transportation Company; F. W. Ackerman, vice-president, Pacific Greyhound Lines; Howard W. Fritch, president, Boston & Maine Transportation Company; Gene Allen, general manager, Santa Fe Trail Transportation. Other members include Arthur M. Hill, president of the National Association of Motor Bus Operators, and L. H. Ristow, chairman of the National Bus Traffic Association.

Absolve J. Jones of C. & E. I. Dominance

Senators praise his diligence and accuse Boatner of stock speculation

Charges made by Victor V. Boatner, a director of the Chicago & Eastern Illinois, in statements to that road's stockholders and to a Senate subcommittee, to the effect that Secretary of Commerce Jesse H. Jones had been improperly influencing the policies of the road's management, were dismissed as unsubstantiated in a report by the subcommittee's majority, submitted to Chairman Wheeler of the Senate committee on interstate commerce and made public by the Reconstruction Finance Corporation.

As noted in these pages previously, the subcommittee was named to consider Senate Resolution 278, introduced by Senator Reed, Republican of Kansas, to bring about an investigation of allegations that Mr. Jones and the R. F. C. were dominating the managements of roads indebted to the government agency. Mr. Boatner appeared before it on May 5 to outline the evidence upon which he based his assertions, and counsel for the R. F. C. and the C. & E. I. management presented statements designed to refute them. Senator Johnson, Democrat of Colorado, the subcommittee chairman, questioned Mr. Boatner at length concerning his transactions in C. & E. I. securities and his experience as a railway operating officer, and the representatives of the C. & E. I. and the R. F. C. also were accorded the privilege of questioning him.

Reed Won't Sign Report—The subcommittee's report was signed by Senator Johnson and Senator Clark of Idaho, the other Democratic member, but Senator Reed declined to sign it, indicating that it did not "altogether represent his views." Mr. Clark did not take part in the hearing. It was the view of the signers of the report that "Mr. Jones should not be censured but should be commended for his diligence in protecting the loan which the R. F. C. had made to the C. & E. I. Railroad. It appeared that Victor V. Boatner, who brought the charges, had bought C. & E. I. securities at extremely low prices, paying around $1.06 for some 10,000 shares of C. & E. I. common stock. It also was shown that Mr. Boatner has made very substantial profits in trading in the common stock and other securities of the road while a member of its board of directors. His interest in trading in the securities and in gaining control of the railroad and its presidency seems to have prompted his

charges against Mr. Jones and the R. F. C.

Jones Opposed Dividend—"No convincing evidence was submitted which indicated that Mr. Jones exerted any improper influence in the conduct or operation of this railroad," the report went on to say. "The reasonable inference from all the testimony is that Mr. Boatner's charges were made and timed in furtherance of his proxy contest to gain control of the railroad. That his charges of domination are false is amply demonstrated by the fact that over the vigorously expressed views of Mr. Jones, urging a conservative dividend policy by a railroad indebted for government funds, directors of this railroad, at the insistence and upon the initiative of Victor V. Boatner had, for the first time in over 30 years, paid out dividends on the preferred and common stock of the company. The dividend of 50 cents a share paid on the common stock represents approximately 50 per cent of the price which Mr. Boatner paid for his stock."

The report concluded with the recommendation that "in view of the evidence of record there is no justification for further investigation by this subcommittee into charges of the character described in Senate Resolution 278 so far as the C. & E. I. Railroad is concerned."

Says R. F. C. Didn't Want Its Money—The basis of Mr. Boatner's complaints against Mr. Jones were set forth in *Railway Age* of April 22, page 790, it being his contention that, in addition to the alleged opposition of the R. F. C. head to the road's payment of a common stock dividend, that agency's representatives on the C. & E. I. board had blocked consummation of a debt refunding program which Mr. Boatner had proposed. At the hearing he stressed the argument that the R. F. C. had objected to this plan particularly because it contemplated redemption of the road's first mortgage bonds held by that agency at par plus accrued interest, whereas the indenture provided that the bonds are callable at 105 plus interest, which figure the R. F. C. had insisted upon receiving. The plan for the reorganization of the C. & E. I. approved by the Interstate Commerce Commission contained a provision, Mr. Boatner asserted, under which the R. F. C. would be required to permit the road to purchase these securities from it at par plus interest, and he let it appear that the R. F. C. was reluctant to dispose of the bonds at par not only because it wished to profit by the premium provision of the indenture but also because it wished to retain its representation on the C. & E. I. board.

When the terms upon which the R. F. C.'s holdings of the road's bonds could be taken up were under discussion at the hearing, Senator Reed let it be known that he thought the government agency should not neglect any opportuinty to "get out with a whole hide" in any case where it had advanced money to railroads.

Counsel for the C. & E. I. management, W. McNeil Kennedy, informed the subcommittee at the hearing that the road intends to use its available resources to retire its debt, as it has been doing, but that its board of directors had rejected the particular plan suggested by Mr. Boatner because it would require too much cash and because it would require an over-all expenditure greater than would be required under the optional provisions of the present mortgage. He added that counsel for the road and counsel for the trustee under the mortgage agreed with the R. F. C.'s counsel that a premium must be paid the R. F. C. to redeem the bonds held by it under the plan proposed by Mr. Boatner.

R. F. C. Dominant in Management—Going into the question of his alleged ambition to become president of the C. & E. I., Mr. Boatner informed the committee that the principal interests represented on the road's board had agreed late in 1941 that he should have this position, but he had been "drafted" by the late Joseph B. Eastman to take the post of director of the Division of Railway Transport of the Office of Defense Transportation before the change in management could be accomplished. Mr. Jones did not commit himself when this proposal was first made, he said, but later objected to any change in the road's management. Mr. Jones' views prevailed with the directors, he indicated, because they were supported by the representatives of the insurance companies and savings banks, as well as by the members of the board whose names were approved by the R. F. C. under the provisions of the reorganization, and by the road's officers, whose salaries, he asserted, were subject to R. F. C. approval.

Declaring that the R. F. C. is a "potential usurper of all the lending power in this nation," Mr. Boatner went on to say that it was never intended that that agency should take control of or manage its debtors, or that it should make a profit from its operations. Neither was it intended, he continued, that the R. F. C. should perpetuate itself by refusing to accept repayment of obligations held by it.

Following the release of the subcommittee majority's commendation of Mr. Jones for his "diligence in protecting the loan," Mr. Boatner disclosed that he has requested Senator Wheeler to set aside that report and immediately place the matter before the full interstate commerce committee for an "unprejudiced and equitable review."

O. D. T. Booklet Tells How to Conduct Exit Interviews

The Office of Defense Transportation this week issued a brochure outlining the "constructive use of the exit interview technique as a means of combating excessive turnover of personnel in transportation." The announcement of the booklet's publication included comment on the employee-turnover problem by Otto S. Beyer, director of O. D. T.'s Division of Transport Personnel, whose resignation from that position becomes effective May 15.

Mr. Beyer referred to recent turnover rates in the transportation industry, which reveal that separations for all classes range from a low of 2.4 per cent to a high of 18 per cent a month. He mentioned also a special survey of the problem on Class I railroads which showed a monthly separation rate of 4.3 per cent.

"Translated into round figures," Mr. Beyer said, "this percentage means that over 60,000 persons left railroad employment in the month of March alone. During this same month, records show that railroads hired some 74,000 new employees. However, in view of the fact that the railroads are already short of manpower, they must not only replace those lost, but must also add to their total force. The waste is apparent. Instead of hiring 14,000 persons needed to fill vital railroad posts, they were forced in addition to fill a gap of 60,000 caused by turnover."

In view of this situation and in the light of experience which has shown that many of the causes for turnover "can be remedied through constructive action on the part of the employer," Mr. Beyer urged that careful consideration be given to the adoption of the exit interview. Copies of the brochure may be obtained without charge from O. D. T.'s Office of Information, Washington 25, D. C.

U. P.'s Connors Heads O. D. T.'s Transport Personnel Division

E. J. Connors, vice-president in charge of operation of the Union Pacific, has been appointed director of the Division of Transport Personnel, Office of Defense Transportation, succeeding Otto S. Beyer whose resignation was reported in the *Railway Age* of April 22, page 789. Mr. Connors will be on leave from the U. P. while serving with O. D. T.

As the announcement of his appointment said, "much of his 37 years in railroading has been devoted to manpower problems, particularly in connection with wages and

E. J. Connors

working conditions." He was born at Albany, N. Y., May 4, 1892, and entered railroad service with the New York Central on June 1, 1907, as a trainmaster's clerk. Subsequently he served in clerical capacities in the purchasing, stores, engineering, and transportation departments until 1915, when he was advanced to yardmaster.

In 1918 Mr. Connors entered the service of the United States Railroad Administration as a wage schedule expert on the Board of Railroad Wages and Working Conditions. For a time in 1920 he was employed by the Association of Railroad Executives, then becoming an examiner on the staff of the United States Railroad Labor Board.

On January 1, 1923, Mr. Connors entered the service of the U. P. as supervisor of

wage schedules, remaining in that position until July 1, 1934, when he was appointed assistant to the executive vice-president. In October, 1937, he was appointed assistant to the president, and in August, 1941, he was promoted to his present position of vice-president in charge of operation.

Elliott Promoted by W. P. B.

William Yandell Elliott, director of the War Production Board's Division of Stockpiling and Transportation, has been promoted to vice-chairman for the Office of Civilian Requirements. He succeeds Arthur D. Whiteside.

Upon receiving the appointment which makes him responsible for the planning and programming of civilian goods production, Dr. Elliott issued a statement which embodied comment indicating his understanding of the need for keeping the railroads supplied with essential materials. To an assertion that "no ordinary civilian program" can at this time be allowed to interfere with military requirements, he added the following: "However, some parts of the economy, like railroads, trucking, utilities . . . must stand on the same footing as the less urgent military. Their further deterioration would affect the armed forces, public morale, and the manpower supply for the whole war program."

Rio Grande to Train Leaders for Postwar Period

The Denver & Rio Grande Western will soon inaugurate an intensive supervision and understudy training program to train present supervisors in current and postwar problems and develop understudies for advancement to positions of greater responsibility. It is believed that the program will pave the way for a more orderly readjustment of personnel after the war's end.

The program will be directed by H. G. Warvel, who has been appointed assistant to the chief of personnel. Before coming to the Rio Grande, Mr. Warvel was supervisor of terminals for the Southern region for the Office of Defense Transportation. In 1923, he was appointed special assistant to the president of the Pennsylvania and created the plan of employee-representation which is still in use on that railroad.

Under the training program, supervisors will be assembled in groups of 20 at regular intervals for instruction and discussion. Talks will be made by various department heads. The training program, according to the railroad, will make it possible for the management to maintain a reservoir of potential leaders in all branches of the railroad.

Price Regulation for Railway Car Builders Discussed

Members of the recently-appointed industry advisory committee representing railroad car builders have held an organization meeting and discussed provisions of the price regulation affecting the industry with officials of the Office of Price Administration in Washington, that agency recently announced. The industry group selected the following officers: Chairman T. P. Gorter, Pullman-Standard Car Manufacturing Company, Washington, D. C.; Vice-Chairman R. A. Williams, American Car and Foundry Company, New York; and Secretary W. C. Tabbert, American Railway Car Institute, New York.

Other members of the committee are: J. F. Clary, E. G. Budd Manufacturing Company, Philadelphia, Pa.; K. C. Gardner, Greenville Steel Car Company, Greenville, Pa.; R. L. Gillispie, Bethlehem Steel Company, Bethlehem, Pa.; B. C. Hanna, Ralston Steel Car Company, Columbus, Ohio; Leslie E. Hess, J. G. Brill Company, Philadelphia, Pa.; J. F. MacEnulty, Pressed Steel Car Company, Inc., New York, N. Y.; Edwin B. Meissner, St. Louis Car Company, St. Louis, Mo.; Lester N. Selig, General American Transportation Corporation, Chicago; A. Van Hassel, Magor Car Corporation, New York; L. C. Wilkoff, Youngstown Steel Car Corporation, Niles, Ohio; W. F. Wieland, Mt. Vernon Car Manufacturing Company, Mt. Vernon, Ill.

Facilitates Substitution of Rail for Truck Service

Acting in response to "the urgent need in the present war emergency to conserve the existing motor vehicle facilities for the transportation of property," the Interstate Commerce Commission has issued Emergency Order No. M-5 to facilitate the substitution of rail service for truck service. The order is dated May 8 and becomes effective May 25, remaining in effect until December 31 "unless otherwise ordered."

It permits motor carriers upon one day's notice to stipulate in their tariffs that rail service may be substituted for truck service, such permission being conditioned upon certification by the Office of Defense Transportation that the substitution in any particular area, between any points, or from or to any points, "will not adversely affect the transportation of freight by railroad and will aid in conserving motor carrier transportation facilities."

Shippers would continue to pay the published rates of the truckers, while the latter would pay the railroad tariff rates and tender the freight to the railroads on railroad bills of lading. Also, substitution arrangements must be limited to routes over which the substituting motor carriers are authorized to operate and over which they continue to provide road-haul truck service.

O. P. A. Car Builders Advisory Committee Organizes

Members of the recently appointed industry advisory committee representing railroad car builders have held an organization meeting and discussed provisions of the price regulation affecting the industry with officials of the Office of Price Administration, the O. P. A. announced on May 4.

The industry group selected the following officers: Chairman—T. P. Gorter, of Pullman Standard Car Manufacturing Company, Washington, D. C.; vice chairman—R. A. Williams, of American Car & Foundry Company, New York; and secretary—W. C. Tabbert, of American Railway Car Institute, New York.

Other members of the committee are: J. F. Clary, E. C. Budd Manufacturing Company, Philadelphia, Pa.; K. C. Gardner, Greenville Steel Car Company, Greenville, Pa.; R. L. Gillispie, Bethlehem Steel Company, Bethlehem, Pa.; B. C. Hanna, Ralston Steel Car Company, Columbus, Ohio; Leslie E. Hess, J. G. Brill Company, Philadelphia, Pa.; J. F. MacEnulty, Pressed Steel Car Company, New York; Edwin B. Meissner, St. Louis Car Company, St. Louis, Mo.; Lester North Selig, General American Transportation Corporation, Chicago; A. Van Hassel, Magor Car Corporation, New York; L. C. Wilkoff, Youngstown Steel Car Corporation, Niles, Ohio; W. F. Wieland, Mt. Vernon Car Manufacturing Company, Mt. Vernon, Ill.

Seek Wage Rise in Canada

Railway representatives told the Dominion War Labor Board at Ottawa last week that wage increases sought by 17 of the railway unions would cost between $84,000,000 and $100,000,000 a year and would have a disastrous effect on Canada's anti-inflation policy.

Earlier the board heard the main presentation from the unions which, speaking on behalf of 100,000 Canadian railway employees, asked that wage rates for members of the transportation unions be brought up to the level paid on Eastern United States lines, and that other employees be given an increase of 23 cents an hour.

The unions testified Canadian railway employees have received no general wage increase in 15 years, and that the present disparity between Canadian and United States rates was a departure from a long established practice of parity, and constituted "discrimination" against Canadian railwaymen.

Figures placed before the board by the brotherhood gave the basic rates for locomotive engineers in Canada as $7.06 to $9.08 a day, $1.66 to $1.86 below U. S. rates. Canadian conductors' rates at $6.77 to $7.08 were from $1.32 to $1.61 below the U. S. rates, and mechanical trades at 79 cents an hour in Canada were said to be 25 cents below United States rates.

The union presentation was made by Howard Chase of Montreal, vice-president of the Brotherhood of Locomotive Engineers. Officers of all the unions involved attended the hearing.

Representing the railways were G. A. Walker, general solicitor C. P. R., F. W. Edge, director of industrial relations, C. N. R., H. D. Brydone-Jack, C. P. R., acting personnel manager, and several other senior officers of the railways.

Justice M. B. Archibald, chairman of the board, is hearing the application with Leon Lalande and John A. Bell, board members.

"The economic well-being of all the people of Canada is involved in this application, striking as it does at the very foundation of the policy of price and wage control which the government has laid down as essential to the welfare of the nation," the railways contended. The increases, they said, also would imperil the post-war position of the railways.

Under an agreement providing for the present cost-of-living bonus there was to be no change in the basic wages, which were to remain in effect until one year after the proclamation of peace. When that agreement was made the disparities in

Canadian and United States rates which the unions complained of were in existence.

This was evidence, the railways said, that the differentials in wage rates between the U. S. and Canada were justified, and that railway wages were fair in comparison with those paid in other industries.

The disparity between Canadian and United States rates dated back to 1927, and the railway wage structures were not related either by agreement or practice. Three conciliation boards had at various times ruled that economic conditions in the two countries did not justify application of United States wage scales in Canada.

While Canadian and United States railway wages had been on a parity in 1922 there had also been at that time parity in freight rates which had since ceased to exist, it was pointed out.

"Since the year 1922 the economic policies of the two countries have followed different lines, and neither railway revenues nor employees' wages, and few, if any, of the other determinative economic factors in the United States and Canada have been on a comparable basis," the brief said.

There had been no general increase in Canadian freight rates in Canada since 1922, while in the United States there had been six blanket increases, some temporary and others permanent.

W. M. C. Calls St. Louis "School for Railroaders" a Success

A wartime school for railroaders, "first of its kind," established recently at St. Louis, Mo., for the training of firemen, brakemen, and switchmen "has proved so successful that it may become the pattern for a nationwide plan of organized training to keep the railroads operating at highest efficiency possible," said a May 5 press release from the War Manpower Commission.

The announcement added that the plan was being studied by railroad officers who are "reported" to be considering the establishment of similar schools at Chicago, Seattle, Wash., "and possibly at other points."

The St. Louis school was set up in cooperation with W. M. C.'s Bureau of Training and "vocational training specialists." Nearly 100 firemen, brakemen, and switchmen were enrolled, the training taking place in the offices and yards of the St. Louis Terminal Railroad Association. Other cooperating railroads are the Missouri Pacific and St. Louis-San Francisco.

W. M. C. has likewise organized classes for railroad telegraphers, not only at St. Louis but also "at widely separated points, including Portland, Ore., The Dalles, Minneapolis, Minn., and Kansas City, Mo." Schools for railroad rate clerks have been set up at Charlotte, N. C., and Winston-Salem, "and other points"; while courses for car repairmen recently were authorized at St. Cloud, Minn.

Formal Permits Issued for Convention "Specials"

The Office of Defense Transportation on May 5 issued the formal permit under which railroads will be authorized to operate special trains or cars to Chicago for the national political conventions during June and July. The authorization is contained in General Permit ODT 24-9. Conditions under which the special convention service is to be available were outlined in the *Railway Age* of April 8, page 688.

Botsford Leaving O. D. T.

Samuel Botsford, information officer of the Office of Defense Transportation, has resigned to accept a position with the Petroleum Reserves Corporation, another government agency. He will be succeeded at O. D. T. by Charles Prins, who has been associated with the Office of Price Administration's information division.

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since April 27, and which are of interest to railways:

Anti-Friction Bearings—The period for reviewing the requirements of substantial users of anti-friction bearings has been extended through January, 1945, by amending Direction 1 to Table 12 of GSO M-293. This direction formerly required substantial users to submit their anti-friction bearing requirements for the period from April 1 through September 30, 1944, on Form WPB-3333. The same form must be filed by June 1, 1944, for requirements for the August, 1944-January, 1945, period.

During the latter period, no person may accept in any one month any anti-friction bearings from a manufacturer or distributor in excess of the following amounts without specific authorization on Form WPB-3333: (a) 1,500 bearings of any one size where they are being purchased for incorporation by such person in his end products or for reshipment with his end products as concurrent spare bearings; and (b) 500 bearings of any one size where they are being purchased for reshipment to the Army, Navy, Maritime Commission, or War Shipping Administration subsequent to delivery of the end product. If a person has more than one plant, the amounts specified above shall apply to deliveries to each plant.

Authorizations to be made on the latest filing of WPB-3333 will supersede previous authorizations made for August and September on previous filings. Any person who, subsequent to June 1, 1944, finds that he will require bearing deliveries in any one month during the period August 1, 1944-January 31, 1945, in excess of the amounts specified in paragraphs (a) and (b) above, should immediately file Form WPB-3333 submitting his requirements. In submitting the form, such a person must state delivery requirements for the sizes required to be reported for the months of August, 1944, through January, 1945. In submitting end product production schedules in Section III of Form WPB-3333, the applicant must give such schedules for the months of August, 1944, through April, 1945, inclusive.

All persons who during May, June and July, 1944, require bearings in excess of the minimum amount specified in the order were instructed to submit those requirements by March 1, 1944, by the provisions of Direction 1 to Table 12 of Order M-293 as originally issued February 8, 1944. Any person having such requirements who has not filed WPB-3333 should do so as soon as possible, WPB said.

Authorization by WPB to accept delivery of bearings does not constitute an allocation to the applicant against the bearing manufacturer, but simply establishes the maximum amounts that the applicant may accept of those sizes of bearings required to be reported under Direction 1. Applicants must adjust their shipping releases on bearings manufactured to conform with the authorized amounts.

Corundum—The overall corundum supply situation will remain tight, at least during the coming several months. The supply which may be expected from the deposit in Gallatin County, Montana, will result in additional production which may be counted on, but not before early fall, WPB officials said, and corundum imports remain insufficient to supply present industry requirements.

Industrial Instruments — Conservation Order L-134, which restricted the use of chromium, nickel, or any alloy of these materials in the manufacture of industrial instruments, control valves and regulators, was revoked May 3. Chromium and nickel are not freely available, but the alloys in which these materials are normally combined and which have been conserved by Order L-134, are not now in as tight supply as when the order was issued. The use of nickel still is controlled by Conservation Order M-6-b.

Reconditioned Valves—Two changes have been made in the definition of a "reconditioned valve" in Amendment 128 to Revised Supplementary Regulation 14 to the GMPR—effective May 8. Previously, a reconditioned valve was one which had all defective parts replaced with new ones. Since new parts are not always available, the amendment provides that defective parts must be replaced with new, reconditioned, or serviceable used parts. Also it was formerly required that reconditioned valves be subjected to hydrostatic pressure tests at double the rated water working pressure of the particular valve. Since such tests, in some cases, were more stringent than those required for new valves, it is now provided that the test shall not be in excess of the hydrostatic test pressure to which the valve was subjected when tested as a new valve.

Safety Equipment—Restrictions have been removed on the use of aluminum, alloy steel, and certain other materials from the order controlling the manufacture of safety equipment. Aluminum may now be used to the extent permitted by M-1-i, and alloy steel may be used for any safety equipment. However, special alloy steels (other than N. E. triple alloy) are still controlled by the WPB Steel division.

Other changes made in L-114 as amended May 1, follow: Restrictions on asbestos cloth, plastics, and elastic fabrics are removed. Chromium is permitted in alloy steels and in plating of safety equipment where the plating has a functional purpose. Safety shoes and warning signs are no longer covered by the order, since they are controlled by orders M-217 and L-29 respectively. Former restrictions on the use of copper, nickel and tin remain unchanged. Safety items covered by L-114 include guards, goggles, shields, safety cans, safety clothing, respirators, inhalators, headgear, resuscitating apparatus and protective creams. Order M-1-i, permits the use of aluminum in safety equipment, as defined in L-114, where copper, copper base alloy or aluminum was used in commercial production in the United States in 1939, 1940 or 1941.

Sprocket Chains and Wheels—An amendment to L-193-a, clarifies certain provisions of the order relating to the working inventories of sprocket chain, attachment links or chain wheels that may be acquired by users or dealers. The order does not place inventory limitations on maintenance, repair and operating supplies.

Prices

Hardwood Flooring—Amendment 3 to MPR-432, effective May 1, provides several changes in the northern hardwood flooring regulation designed to revise differentials between grades in several items of maple, birch and beech flooring and establish dollars-and-cents differentials for certain lengths. This action also sets up a procedure under which a producer, unable to operate without loss under the regulation's ceilings, may apply to OPA for an individual price adjustment. All such applications must be filed before June 1, 1944.

Plywood—Coverage of the Douglas fir plywood regulation has been extended to include plywood made of all softwood species except plywood which contains one or more laminations of hardwood veneer, by amendment No. 1 to Second RMPR-13, effective May 11.

GENERAL NEWS

Very-High Frequency Radio on Railroads

B. & O. reveals prospects which have led it to undertake experimental program

Radio of very high frequency, similar to that used in some types of aircraft, is being experimented with for railroad use, after investigation begun nearly a year ago on the Baltimore & Ohio. An announcement made by A. S. Hunt, general superintendent of communications, B. & O., adds that the experiments are being carried on jointly by the railroad and the radio division of Bendix Aviation Corporation.

As announced in the May 6 issue of *Railway Age*, the Federal Communications Commission has granted permits for the construction of five radio transmission stations on the B. & O. between Baltimore, Md., and Pittsburgh, Pa. Four of the stations will be mobile transmitters about the size of a household floor model set, weighing about 130 lb. No revolutionary changes in railroad communications are expected immediately, but the results of the impending tests are expected to provide railroads with information concerning the potentialities of very high frequency radio transmission in railroad use in the postwar period, when the equipment will be available from radio manufacturers.

Concerning the purpose of the experiments, J. H. Wallis, communications engineer, B. & O., said the following:

Short Range of High Frequency—"In the ultra-high frequency range, transmission of radio signals is limited to a relatively short range, in general distances only slightly greater than 'line of sight' can be expected. This in many respects is an advantage for some types of services. It permits, in connection with the highly directional antenna systems possible, a system to be so designed that it will provide satisfactory communication over only the area desired and will not cause interference with systems in adjacent areas. This, in connection with the use of frequency modulation, will allow many channels to be operated in the same area with a minimum of interference.

"Of recent months, various interests have been clamoring for railroads to use radio as a safety measure. While this is important, it does not make up the entire need of radio for railroad use. As a safety measure, radio might perhaps prevent some accidents and this point is by no means being overlooked. As a direct contribution to the war effort, however, radio can be used to a much greater advantage in expediting train movements both on the main line between cities and at terminal switching yards.

Devices and Wave Bands Not Yet Available—"In spite of reports to the contrary, the following facts stand out:

1. Bands of radio frequencies have not been allocated for permanent railroad use.

2. Neither the railroads nor the radio industry have sufficient information about this type of service to ask intelligently for specific bands of frequencies at this time.

3. Commercial radio equipment is not being manufactured at this time that is suitable for railroad use.

"In order to correct some of these conditions, the experiment being conducted at the present time will help to determine the following:

1. How radio communication can be used to best advantage to insure greater safety and prompter handling of train movements.

2. What technical features are necessary and desirable for this type of service.

"When this information is available it will be distributed through the proper channels to the railroads and radio industry so that it may contribute as fully to the efficiency of railroad operations as possible."

Horning to Address N. Y. R. R. Club

Vice-President (Personnel) L. W. Horning of the New York Central will address the New York Railroad Club on May 18—his subject to be "Personnel Practices in the Railroad Industry." The meeting will be held, as usual, at the Engineering Societies Auditorium, 29 West Thirty-ninth street, at 7:45 p. m. Following the address, the New York Central's film, "The Steam Locomotive," will be shown.

A. A. R. Publicity Man to Write Books on Railroading

Albert R. Beatty, manager of the Publicity Section of the Association of American Railroads, has contracted with Duell, Sloan & Pearce, New York publishing house, to write two railroad books.

The first, to be published as soon as possible, will be a pictorial history of the American railroads. Through several hundred illustrations with brief text, it will trace the development and progress of rail transportation from its beginning to the present time. The second book, for publication after the war, will be a record of how the railroads met the nation's military and civilian transportation demands during World War II.

High Wages Obstacle to Full Employment

F. Hall fears their effect on competition—Subsidies fostering socialism

In the annual report of the Nashville, Chattanooga & St. Louis to its stockholders, President Fitzgerald Hall reveals significant developments in the realm of personnel and labor relations—as well as a lively concern for the dangers in the offing from the augmentation of government-financed rivalry to the railroads. On the first-named subject he discloses that the company now has about twice as many employees as at the time of Pearl Harbor, and that 60 per cent of them have had no previous railroad experience—yet with such a working force, the road last year handled three times the freight traffic and six times the passenger traffic that it did in 1938. Because of the shortage of fully-trained men, some firemen have been promoted to the right side of the cab with barely three years' experience behind them.

The wage increases granted in 1941 and 1943 represent an annual increase of over $5,000,000 in the company's payrolls (i.e., a sum 35 per cent in excess of 1943 net income). "When the war is over and emergency traffic ceases, these tremendous increases, which may continue, are going to make it very difficult to maintain employment and meet competition," Mr. Hall warns.

To Seek Well-Educated Employees—The better to assure itself of the most competent personnel, the company's policy "hereafter will be to employ in thoroughly technical branches as many college men as may be available and, in other branches of service, those with as much education as possible. Likewise, the railway, through its school course, will undertake to help those already employed to better help themselves.

"Government continues to help finance and otherwise favor other forms of transportation," Mr. Hall reported, "and plans are in the offing to spend more public funds to directly aid transportation by motor vehicle, air and water. The railroad industry is entirely sound in its conception and is reasonably good in its operation. It is entirely able and willing to meet any competition which is not shown special favor by government.

How to Prevent Socialism—"It may prove undesirable for railroads to engage in all other forms of transportation, but it is an obvious fact that many railroads

(*Continued on page 915*)

Arbitration Begins on Vacation Dispute

Contestants do not agree on days to be paid per week or hours per day

Hearings on disputes regarding pay for vacations for members of the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors and the Switchmen's Union of North America on Western, Eastern and Southeastern railways, were begun at Chicago on May 4 before an arbitration board of the National Mediation Board consisting of I. L. Sharfman, chairman, C. J. Goff, assistant to the president of the Brotherhood of Locomotive Firemen & Enginemen, and L. W. Horning, vice-president, personnel, of the New York Central. At the time of going to press it was expected that the hearings would be completed by May 13.

How Many Days in a Week?—In this dispute, the carriers maintain that pay for a week's vacation for enginemen or motormen, firemen or helpers, hostlers, hostler helpers, conductors, brakemen, flagmen, baggagemen, dining car employees, yard foremen, yard helpers, switch tenders, yardmasters and other yardmen should be the equivalent of six minimum day's pay. They also seek to make arbitrary a 160-basic-day qualifying period. The employees contend that pay for a week's vacation should be based on total earnings, so that "employees will not have to make financial sacrifices" and that an employee qualifies for a vacation if he performs service in four or more calendar months.

Vacations with pay were granted these employees in an agreement of January 14, 1944, and were one of the issues which led to the taking of a strike vote and seizure of the railroads by the government on December 27, 1943.

At that time, the Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen agreed to let President Roosevelt arbitrate their grievances, including their vacation dispute, and thus far no decision has been made on their vacation pay.

How Many Hours in a Day?—At the present hearing at Chicago, the unions are endeavoring to show that eight hours or less or 100 miles or less, does not represent a day's effort for those employees who regularly work in excess of those hours, and who in road service normally have assignments exceeding 100 miles, and frequently in excess of 200 miles, but that the so-called basic day is only a measure for reckoning or computing the amount of paycheck, and, hence, that the carriers' proposal to pay for each day's vacation an amount equal to the minimum day, would result in vacation pay as much as 30 to 40 per cent less than the pay the employee could have earned if he had remained on the job.

In the carriers opening statement, Bruce Dwinell, counsel for the carriers conference committees and general attorney of the Chicago, Rock Island & Pacific, pointed out that the board lacked authority to act upon Section 11 of the agreement, in which the brotherhoods seek vacation agreements for each union but hoped the board would aid in bringing about uniformity.

Need for Uniformity—"Men have seniority as firemen," he said. "They also have seniority as engineers; as trainmen; and as conductors. We anticipate that attention is to be paid to the preference of the men in their seniority order as to the time of the taking of their vacations. But with inconsistent agreements, there would be continual disagreement as to seniority dates, whether of engineers, firemen, conductors or brakemen. I am sure, therefore, the Board will agree with me that there is necessity for uniformity in the agreements."

Testimony of the unions contrasted the number of employees who would receive vacations under the two proposals and the amount of pay. Of the 317,173 train and engine service employees who received pay in 1941, an exhibit showed, 20,151, or 6.4 per cent, would not receive vacations under the unions' proposal while 43,743, or 13.8 per cent, would not under the carriers' proposal.

Other exhibits dealt with the application of basic pay, overtime and guarantees in ascertaining vacation pay. Under the unions' method of computing, overtime and guarantees should be used but if the monthly earnings of regularly assigned passenger conductors, for example, from daily guarantees, mileage, overtime and other rules do not produce the average daily earning minimum per day, they should be paid the daily earning minimum for each day that service is performed.

Another exhibit showed the application of the unions' demands to conductors in through freight service. One run included 202 mi. between Dodge City, Kan., and La Junta, Colo., on the Atchison, Topeka & Santa Fe. The pay per trip is $8.48 per 100 mi. or $17.13 for the 202 mi. Under the carriers' proposal, pay for a week's vacation would be based on the basic day of 100 mi. and would amount to $50.88, while under the unions' demands it would amount to the number of runs made per week times $17.13 or seven times the basic rate of $8.48, whichever is larger.

The carriers started the presentation of their testimony on May 10, the first witness being D. P. Loomis, executive director of the Association of Western Railways. He made a detailed comparison of carrier and union proposals for vacation agreements for employees in engine, train and yard service.

"Crusader" Gets Dolled Up

After several weeks in Reading shops for a thorough renovation, the stainless steel streamliner "Crusader" returned, May 8, to its regular twice-a-day round trip operation in joint Reading-Jersey Central service between New York and Philadelphia.

New York departure times are 10 a. m. and 5 p. m., daily except Sunday, from the railroad's Liberty Street ferry terminal, the train leaving Jersey City 12 minutes thereafter. The Crusader leaves Reading Terminal, Philadelphia, at 6:50 a. m. and 2 p. m.

Heavy Traffic Needed to Meet Present Costs

I.C.C. Bureau shows current expenses would have produced deficit in 1940

Railroads will not be faring so well in the post-war period if their traffic volume shrinks to pre-war levels and rates, wages and other deductions from revenues or income remain on the present basis. This is indicated in the latest issue of the "Monthly Comment on Transportation Statistics," published by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics, where the 1940 accounts have been restated.

A Deficit of $447 Million—The calculation indicates that the net effect of applying the current wage scale, rate level, and other deductions to the 1940 traffic would be to make that year's net railway operating income before federal taxes $32,400,000, and to produce a deficit of $446,500,000 in net income before federal taxes. The Bureau points out that in such a situation the roads, considered as a whole, would have no income tax to pay. The actual net railway operating income after all taxes in 1940 was $682,100,000, and before the federal income tax deduction it was $742,000,000; the net income after all taxes was $188,800,000, and before federal income taxes it was $248,700,000.

"Various possible developments" might offset this indicated result, the Bureau says, listing the following: "(1) Presumably at least some of the operating economies introduced during the war would be retained and perhaps further developed; (2) the further consolidation of railways might bring additional economies; (3) wholesale prices of materials might take a downward course if the traffic declines; (4) employees might accept a reduction in straight time rates per hour; and (5) freight rates might become higher." In the latter connection it is pointed out that the restoration of the suspended Ex Parte 148 freight rate increases "would produce $167,600,000 if applied to the freight revenues of 1940."

Traffic Still Upward—Meanwhile the Bureau's statement had got under way with a notation of the fact that the freight revenue of the Class I roads for March ($597 million) exceeded that of any previous month. Per working day it was slightly below that of October, 1943, "but owing to the difference in season the freight revenue index for March (231.4) is considerably above that for October, 1943." The peak index in 1943 was 233.6 for May.

The passenger revenue index for March at 455 was above 1943's highest figure, i.e., 449.8 in August. These indices of freight and passenger revenues are based on the 1935-1939 monthly averages as 100 with adjustment for seasonal variation. Despite the showing they make for March, the Bureau points out that for both freight and passenger revenue the percentage of increase for that month over March, 1943, "was lower than for the preceding four

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Fairbanks-Morse to Build Diesel Power

Both road and switching locomotives will be made at Beloit plant

Fairbanks, Morse & Co., Chicago, announced on May 8 comprehensive plans for the manufacture of a new line of Diesel-electric locomotives, using opposed-piston Diesel engines of the type now widely used by the navy for submarines and surface craft.

These locomotives will include freight, passenger and dual-service locomotives in standardized units, each powered by a single Diesel engine, and switching locomotives in two capacities, the larger of which will have the characteristics required for operating local freight and passenger trains as well.

All Fairbanks-Morse locomotives will be powered by Diesel engines of the opposed-piston, 2-cycle type, in which two pistons move in opposite directions within each cylinder and a full working cycle is completed in two strokes of the engine. This radically different Diesel engine, developed in the 1930's primarily for locomotive use, has been in successful service for over five years on a number of roads, including the Southern which adopted it in six 2-car Diesel-electric trains (see *Railway Age*, September 16, 1939).

Because the navy demanded the entire production of the opposed-piston Diesel, locomotive development was postponed and a big new plant was built at Beloit, Wis., equipped for the mass production of this engine to meet navy needs alone. The Beloit plant now comprises 36 buildings, covering 40 acres of a 100-acre plant site, with 6,000 employees. Feeder plants for Diesel engine parts, at Freeport, Ill, and Three Rivers, Mich., employ 1,200 more.

As soon as materials are available and labor conditions permit, additional facilities will be built as required at Beloit in order that complete locomotives may be manufactured and assembled there. In the meantime, in order to expedite production, the General Electric Company is co-operating with Fairbanks, Morse & Co. in building the initial units, which are expected to be ready for service late this year.

Designs are already developed for 1,000-hp. switching locomotives, the first of which will be finished within a few months at the Beloit plant and delivered to the Chicago, Milwaukee, St. Paul & Pacific. This first F. M. Diesel switcher for the Milwaukee, like the Southern two-car trains, will have Westinghouse electrical equipment, including the main generator, driving motors and controls.

John W. Barriger, III, vice-president of the Union Stock Yard & Transit Co., Chicago, has been appointed manager of the newly-created Diesel Locomotive division. Mr. Barriger will direct studies of the economics of Dieselization as part of his duties of merchandising the new locomotives. Mr. Barriger was born in Texas in 1899 and was graduated from Massachusetts Institute of Technology in 1921. From 1933 through 1941, he was in charge of the Railroad division of the Reconstruction Finance Corporation, becoming associated with the Carriers' Conference Committee in the 1941 railway wage case. At its conclusion, he returned to Washington as an associate director of the Office of Defense Transportation, a position which he resigned upon his acceptance of the vice-presidency of the Union Stock Yard & Transit Company of Chicago.

Mr. Barriger served as a reorganization manager of the Chicago & Eastern Illinois during 1940, and became a member of its board and executive committee in 1941, retiring from these offices in 1942. He subsequently became a director of the Alton.

R. H. Morse, Jr. (Seated), General Sales Manager of Fairbanks, Morse & Co., in Conference with J. W. Barriger, III, Recently Appointed Manager of the Diesel Locomotive Division of this Company.

I.C.C. to Require Competitive Bidding

Doubts private sales yield to prices; dissenters stress management's job

The Interstate Commerce Commission has made public a finding to the effect that after June 30, competitive bidding in the sale of railroad securities will be required, with certain exceptions. The finding, from which Commissioners Porter and Miller dissented, resulted from the commission's Ex Parte 158 investigation, on its own motion, of the proposal that such a requirement be made effective. Briefs in support of, and in opposition to, this proposal were submitted in advance of oral argument, the substance of which was reviewed in *Railway Age* of November 13, 1943, page 776.

Who the Contestants Are—Requirement of compulsory competitive bidding was urged, among others, by some members of Congress, by two banking firms—Halsey, Stuart & Co. and Otis & Co.—by three railroads—the Chesapeake & Ohio; New York, Chicago & St. Louis; and Pere Marquette—and by the Railway Labor Executives' Association. Such a requirement was opposed by the Association of American Railroads and seven Class I roads that made individual presentations, and by the American Short Line Railroad Association, the National Association of Securities Dealers, the Investment Bankers Association of America, and certain insurance companies and banking firms, including Morgan Stanley & Co. and Kuhn, Loeb & Co., whose part in railroad financing was discussed at some length in the proceedings.

After considering the briefs and arguments of proponents and opponents of the requirement, the commission's majority concluded that (1) there should be required as a condition of approval by it of the sale of railroad securities "that such securities be offered for sale at competitive bidding or, at what is tantamount thereto, upon invitation of bids for the purchase thereof," (2) "that this requirement should be applied to all classes of securities except those specifically designated," or those as to which the commission, "upon special application," rules otherwise, and (3) that no formal rule or order should be issued at present. The commission's report concluded with the finding that "railroads applying after June 30, 1944, for authority to issue securities under the provisions of section 20a [of the Interstate Commerce Act] will be expected to observe these findings."

Exceptions to the Rule—The competitive bidding requirement is to apply to all classes of railway securities except the following: (1) common and preferred stocks; (2) securities issued in exchange for outstanding securities or in connection with a financial adjustment or company reorganization; (3) notes or other securities maturing in not more than 3 years; (4) issues not exceeding $1,000,000 prin-

(*Continued on page 917*)

F. D. Beale Becomes Head of Virginian

Former C. & O. executive is named to succeed Carl Bucholtz, retired

Frank D. Beale is to become president and a director of the Virginian on May 15, succeeding Carl Bucholtz, who retires after 10 years as president. A few weeks ago Mr. Bucholtz was granted a leave of absence at his own request. Prior to his new appointment, Mr. Beale has been vice-president in charge of operation of the New York, Chicago & St. Louis.

Born in Fredericksburg, Va., November 4, 1890, Mr. Beale was educated at Fredericksburg College and the University of Virginia, being graduated in civil engineering from the latter institution in 1915. He entered railway service in 1910 with

Frank D. Beale

the now-abandoned Florida Railway, serving as instrumentman and assistant engineer, successively. In 1915 he joined the Chesapeake & Ohio as assistant section foreman. He rose through the engineering and operating departments until, in 1940, he became assistant vice-president—assistant to president of the C. & O., the Pere Marquette, and the N. Y. C. & St. L., with headquarters in Cleveland, Ohio. In March, 1943, he was appointed vice-president in charge of operation of the N. Y., C. & St. L. During World War I he served with the 314th Field Artillery.

Mr. Bucholtz was born March 21, 1883, in Baltimore, Md., and was educated at Loyola College. He entered railway service in 1902 as special machinist's apprentice at the Mt. Clare shops of the Baltimore & Ohio. He served successively for that road as maintenance of way inspector, assistant engineer, assistant division engineer and supervisor of track. He was for two years maintenance of way inspector on the Missouri Pacific-St. Louis & Iron Mountain at Little Rock, Ark., and, in 1910, became division engineer on that road, at Nevada, Mo. He went with the Erie in 1914 as assistant engineer, Cleveland, Ohio, serving thereafter as division engineer, trainmaster, assistant superintendent and superintendent of the Mahoning division, which latter position he held at Youngstown, Ohio from 1910 to 1917. In 1927 he became assistant general manager, Western district, general manager in 1932. In 1933, Mr. Bucholtz went with the Virginian as general manager, at Norfolk, Va. He was for a short time vice-president and general manager, and in 1934 became president.

Supreme Court Refuses to Rehear Car-Spotting Case

Adopting the unusual course of writing an opinion for such an action, the Supreme Court of the United States this week denied a petition of the Staley Manufacturing Company for a rehearing of the case involving its challenge of an Interstate Commerce Commission order requiring the Wabash, Illinois Central and Illinois Terminal to cancel certain tariff supplements eliminating charges for spotting cars within Staley's Decatur, Ill., plant. The Supreme Court's decision upholding the commission was noted in the *Railway Age* of April 1, page 653.

The opinion on the denial of the petition for rehearing was by Chief Justice Stone. It pointed out that the petition for the first time called to the court's attention "certain alleged changes in the location and arrangement of tracks on which are placed cars moving to and from the tracks of the line-haul carriers from and to Staley's industrial tracks." Such changes, as the court put it, "are alleged to have occurred after submission of the case to the Interstate Commerce Commission and are said to call for a different conclusion than that reached by the commission. . . ."

It then pointed out, however, that a petition for rehearing was addressed to the commission two months before the commission's decision was rendered; but "no evidence was specified or tendered to prove before the commission the allegations of the petitions for rehearing, and no opportunity to introduce evidence was in terms requested." Neither was any evidence on this phase taken in the district court which did not pass on it.

Thus, Chief Justice Stone went on: "Nothing in the petitions to the commission for rehearing or in the petition here affords any basis for saying that the alleged changes in conditions are of a character which would require any modification of the commission's order or that appellees could not, with due diligence, have brought the changes to the attention of the commission before it made its report."

The court's adverse ruling, however, is "without prejudice to appellees' presentation in any appropriate proceeding before the commission and the courts, of their contention that as a result of changed conditions after the case was submitted to the commission, the spotting service as now performed is not in excess of the carriers' obligation under their tariff rates, and that its performance is therefore not unlawful."

Abandonment Bill Is Vigorously Opposed

Railroads and I.C.C. say its provisions would alter established policy

Opposition to the provisions of the bill introduced by Senator Reed, Republican of Kansas, to modify the Interstate Commerce Act's terms with respect to the authorization of railway abandonments by the Interstate Commerce Commission was expressed last week at hearings before a subcommittee of the Senate committee on interstate commerce by Commissioner Splawn, appearing for the commission, and by spokesmen for the railroads. As reported in *Railway Age* of May 6, page 864, support for the bill has come mainly from the state commissions, more than two-thirds of which have gone on record to that effect.

Have Abandonments Done Harm?—Dr. Splawn appeared before the subcommittee on May 4 to amplify the views already set forth in a statement by the commission's legislative committee and Division 4, as reported here last week. He began his remarks by challenging some of the premises upon which the bill's provisions were based, particularly the assertion that rail abandonments since 1920, when the commission was given jurisdiction over them, have resulted in a "less useful transportation system." Factual data as to the consequences to the communities affected of abandonments are not available, he pointed out, and he questioned whether anyone could submit authoritative estimates of the consequences. What the witnesses for the state commissions had done, he suggested, was to give "recitations" as to particular cases where they disagreed with the commission's findings of convenience and necessity.

The issue, Dr. Splawn thought, was much bigger than whether the commission has "occasionally fallen into error" in the disposition of around 2,000 abandonment applications considered by it, and grew out of a new situation before it and before the country, that of conservation of all forms of transportation in the face of "cut-throat competition" between the different forms.

Must Unwanted Railroads Persist?—Pointing out that there is little or no opposition to the abandonment of rail lines built to serve some natural resource that has become exhausted, or a plant that has ceased operations, the commissioner presented data to show that prior to 1935 the major cause of abandonments was such exhaustion of natural resources, accompanied by drying up of the line's traffic. Since that time, however, he explained, highway competition has been the principal reason for abandonments. This trend leaves the inference, he pointed out, that the communities concerned increasingly have substituted this new form of transportation, that is, the motor vehicle, for the railroad, but he did not subscribe to the view that the communities were any worse off for having done so, and thus having allowed the rail lines to be abandoned.

There has been a slow evolution in the

competition between the several forms of transportation, Dr. Splawn went on to say, of which abandonments of stub lines and segments of branches by the railroads have been a part. This process is still going on, as the different agencies of transportation adjust themselves to changing conditions, he remarked, and the progress they severally will make during the next few years in the way of technological improvements and other measures to meet these new conditions is "problematical."

Suggests Inquiry into Wasteful Rivalry—The final answer to the question whether a rail line or its highway competitor should abandon operations in competitive situations is not to be reached "in a minute," or in a single session of Congress, he suggested. If the subcommittee could broaden its inquiry into a study of what is wasteful competition and what can be done about wasteful competition, it would contribute to the solution of what is now a "challenging problem," he added.

Without expressing his own view, or that of the commission, toward the idea, this witness remarked that the committee might consider modifying the provisions of the bill before it so that the commission would be required, before authorizing an abandonment, to find that the abandonment would not impair the ability of the carrier to serve the public, just as it is now required to make such a finding upon applications for approval of new construction. While some of the "clarifying" amendments to the proposed bill that were suggested by the state commission witnesses might be desirable, so far as they would affect procedure, Dr. Splawn said, the major provisions of the bill, as introduced by Senator Reed, would be likely to result in too much rigidity in commission procedure.

Sees Abandonments Prohibited—Rather than to better inform the commission of the policy of Congress as to abandonments, he remarked in conclusion, the bill more probably would amount to a prohibition of rail abandonments where objections were offered by the communities involved.

The results of a tabulation by the commission's Bureau of Transport Economics and Statistics of the dominant causes of abandonments authorized by the commission were given the committee in terms of the number of applications and the mileage involved, by Class I roads and others, for the period 1935-1943 inclusive, during which time 1,059 applications were approved. The data as to miles affected appear in the accompanying table.

The objections of the railroads to Senator Reed's proposals to restrict the discretion of the commission in acting upon abandonment applications were expressed by J. M. Souby, general solicitor of the Association of American Railroads, speaking for the Class I carriers, and C. A. Miller, vice-president and general counsel of the American Short Line Railroad Association, speaking for the 318 roads having membership in that organization.

Public Interest Protected Already—Since the passage of the Transportation Act of 1920, said Mr. Souby, the policy of Congress clearly has been that the primary purpose of railroad regulation should be "furthering the general public interest. The interests of the railroads themselves or of particular individuals and classes were to be permitted to control only where and to the extent that they coincided with the interest of the public as a whole." In carrying out this policy, the commission "has always placed upon the railroad the burden of proving that an abandonment is consistent with the present and future public convenience and necessity and has always insisted that it must have before it proof in sufficient detail to leave no reasonable doubt as to the justification for the abandonment."

CAUSES OF RAILROAD ABANDONMENTS, 1935-1943

Dominant cause	Total all roads		Class I roads and subsidiaries	
	Miles	Per cent	Miles	Per Cent
Exhaustion of natural resources	3,132.68	19.69	2,087.08	19.80
Competition	9,567.21	60.14	5,918.85	56.14
Highway	9,158.77	57.58	5,570.28	52.83
Railroad	299.89	1.89	245.43	2.33
Waterway	33.90	.21	32.37	.30
Pipe line	74.65	.47	70.77	.67
Relocation or cessation of industry	1,112.97	6.99	695.61	6.60
"Rationalization" of railroad plant	1,620.49	10.19	1,400.48	13.29
New construction (relocations)	424.66	2.67	422.91	4.01
Elimination of duplicate rail service	1,143.22	7.19	943.23	8.95
Substitution of highway service	52.61	.33	34.34	.33
Other	474.02	2.98	440.66	4.18
Totals	15,907.37	100.00	10,542.68	100.00

A review of the commission's decisions in abandonment proceedings does not bear out the contention of some of the witnesses before the subcommittee that a showing that operation can be continued only at a loss is taken as determinative in approving applications, Mr. Souby went on to say. Such a showing is taken into consideration, he pointed out, but the commission has long held that the point at which lack of earning power shall be considered to justify abandonment "is a matter of sound judgment, and must be determined by the circumstances of each case," after weighing the loss to the public against the burden that continued operation would impose on interstate commerce.

Courts Don't Require Profitless Operations—Decisions of the Supreme Court, he went on to say, would appear to indicate that the commission's standard in this respect goes beyond the requirements of the law, since the court has held that "a carrier cannot be compelled to carry on even a branch of business at a loss, much less the whole business of carriage."

Aside from the safeguard against "improvident abandonments" thus set up by the commission, the witness went on to say, as a matter of self-interest "no railroad would want to abandon a line that is either making or has promise of making a contribution to its system revenues." He went into some detail to illustrate the variety of circumstances that have led to abandonments, thus developing his contention that they are by no means chiefly a means of correcting the railroads' own past mistakes. The net benefit to the national transportation system of many abandonments is obvious in the light of these circumstances, he pointed out, as in cases where duplicate facilities are eliminated, line improvements are completed, or a mine or other traffic source has been exhausted.

Protestants Often Not Harmed—In situations where the abandonment application is protested, he added, it does not always follow that the protestants can show injury will result from cessation of the rail service. Such protests sometimes are prompted by the community's interest in the local taxes paid on the rail line, and sometimes by the idea that the community's "prestige" is measured to some extent by the number of lines that serve it, he remarked.

If Senator Reed's purpose in introducing the bill under consideration was only to insure that the commission hereafter will authorize no abandonments where there is serious doubt as to its conformity with the national policy of insuring the maintenance of an adequate and efficient transportation system, the railroads probably still would oppose its passage, Mr. Souby indicated, on the ground that it is "wholly unnecessary." They object to it more particularly, however, he went on to say, because it "reaches far beyond" any such purpose, and would "have the very positive effect of working incalculable harm," because it "would actually have the effect in all cases of seriously hampering, and in a great multitude of cases of absolutely preventing, abandonments as to the desirability of which in the public interest there is no room for dispute."

Taking up the declaration of policy as set forth in the bill, particularly that part which would require that "it shall conclusively appear that the efficiency of the national transportation system will be increased" by the abandonment proposed, the railroads' spokesman pointed out that this requirement would impose a higher degree of proof than is exacted in a criminal action, which requires proof "beyond a reasonable doubt," the rule now followed by the commission.

The Public Quits First—The suggestion that rates might be increased to bring in greater revenues to meet the losses that lead to abandonment proposals the witness termed "unrealistic." "Usually such a line has already been largely abandoned by the public before it is proposed to be abandoned by the railroad," he said. "The reason for its abandonment by shippers and passengers is certainly not one which would be eliminated by an increase in its rates and fares." The suggestion that differential rates be applied on unremunerative branch lines be also condemned, pointing out that the practice, because of its discriminatory aspects, was almost a thing of the past.

Rivals Don't Have to Run in Red—The A. A. R. solicitor concluded his statement by emphasizing two other considerations which, he declared, impel the railroads' opposition to the bill. Neither motor carriers nor water carriers are under any restriction whatever with respect to the abandonment of their operation, he pointed out, so they are able to inaugurate new operations in competition with the railroads "upon the least provocation," and abandon them almost at will if they prove unprofitable. No "thoughtful person," he added, "can fail to be seriously concerned over railroad prospects for the future," when the conclusion of the war releases the full impact of competitive transportation developments upon them. To add the handicaps involved in this bill to those which the railroads already are bearing in preparing for the "most difficult competitive struggle" ahead would be most discouraging, he suggested.

Finally, said Mr. Souby, the railroads' success in measuring up to the unprecedented demands for transportation arising from the war has been due, in part, to their ability in the past to lop off parts that had served their purpose or that had ceased to be productive, so that their resources could be conserved and applied to the improvement of their essential and productive lines and their equipment and manpower could be concentrated on useful operations.

Wage Costs an Abandonment Cause—In a statement placed in the record on May 4, Mr. Miller went into some detail to explain how the short lines would be affected by the proposed bill, and how its provisions would fail to meet some of their peculiar circumstances. Among factors that have contributed to the abandonment of short lines he called attention to these: Some never were economically justified, but were conceived in a spirit of civic pride; some were built to serve a particular industry, and have completed that service; some have lost substantially all of their traffic to competing motor carriers; some for no one reason were unable to make ends meet; some suffered from restrictive routing or the effects of land-grant rate equalization agreements; statutory requirements, and their interpretations, in some instances have affected the short lines disproportionately; and "the labor and wage policies of the government have so increased the operating expenses of the short lines that some have had to be abandoned," while other cases of this type are impending.

Pointing out that "the commission, of course, cannot refuse authority to abandon an entire line when it is operated at a loss," and that the commission's jurisdiction, as applied to lines entirely within one state, extends only to interstate and foreign commerce, state authority being necessary for abandonment as to intrastate commerce, Mr. Miller remarked that "It is safe to say that in practically every instance where the commission has authorized complete abandonments of short lines there has been a recognition by their owners of their obligation to serve the communities and industries dependent upon the railroad, but it must be recognized that such an obligation comes to an end when those industries and communities fail to furnish traffic sufficient to enable the railroad to stay in business. The obligations are bilateral and not unilateral. People who do not support a railroad do not need one."

A "Right" to an Unpatronized Service—That part of the declaratory section of the bill which states that the public has established homes and industries along rail lines in expectation of their permanence also seemed objectionable to the short lines' counsel, both because it is inapplicable to lines built to serve a specific natural resource, in his opinion, and because "no one has a right, legal or moral, to rely upon the continued operation of any railroad as a permanent means of transportation, and that is especially true of those who give their traffic to trucks, as now so frequently happens."

Tax Reductions Hard to Get—Provisions in the bill with respect to tax statements and increased rate divisions were considered impracticable. Short lines had met with little success in getting local tax burdens lightened, and none at all when federal taxes were involved, he pointed out, while the law of diminishing returns prevents short line "arbitraries" from being effective, except in rare instances.

Concluding with the observation that all the short lines would like to continue in business and prosper, their spokesman suggested that Senator Reed's bill was not designed to keep them alive, but rather to prevent a decent burial after their death. A solution of the problem of short line abandonments can be better attained, he thought, "by the enactment of constructive legislation which will enable short line railroads to increase their revenues and decrease their expenses."

In addition to those supporters of the bill whose appearances were noted in these pages last week, the subcommittee on May 3 heard similar views from a group of representatives of state commissions. These included C. W. McDonnell, a member of the North Dakota Public Service Commission; Richard B. McEntire, general attorney of the State Corporation Commission of Kansas; Claude H. Swain, a member of the New Hampshire Public Service Commission; Robert Janss, assistant commerce counsel of Iowa, and C. B. Bee, special counsel for the Oklahoma Corporation Commission.

B. of L. E. Blames Government—John T. Corbett, national legislative representative of the Brotherhood of Locomotive Engineers, indicated that organization's support of the purposes of the bill. He took the position, however, that Congress should share the blame with the railroads for the conditions it proposes to correct, since Congress has not required the commission to give consideration to the effect of motor competition on other forms of transportation in issuing certificates for motor carrier operations, and particularly because the government has subsidized and continues to subsidize the railroads' direct competitors, thus contributing to the cost of building facilities for the express purpose of taking business away from the railroads.

Another phase of Mr. Corbett's statement drew expressions of complete agreement from Senator Reed. These dealt with the "monumental failure" of the Board of Investigation and Research to bring to a useful conclusion studies assigned to it, which were expected to produce for Congress authoritative information on the effects of public aids and taxation on all forms of transportation, from which the "unfair competition" imposed on the railroads could be measured.

Freight Car Loading

Loadings of revenue freight for the week ended May 6 totaled 836,978 cars, the Association of American Railroads announced on May 11. This was a decrease of 14,879 cars or 1.8 per cent below the preceding week, an increase of 20,440 cars or 2.5 per cent above the corresponding week last year, and a decrease of 2,308 cars or 0.3 per cent below the comparable 1942 week.

Loading of revenue freight for the week ended April 29 totaled 851,857 cars, and the summary for the week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, April 29

District	1944	1943	1942
Eastern	167,866	151,275	169,865
Allegheny	193,105	171,585	191,049
Pocahontas	55,873	47,800	57,423
Southern	125,810	116,585	129,808
Northwestern	120,398	108,950	132,840
Central Western	116,501	119,163	113,251
Southwestern	72,304	73,431	64,675
Total Western Districts	309,203	301,544	310,766
Total All Roads	851,857	788,789	858,911
Commodities			
Grain and grain products	37,856	46,597	36,193
Live stock	15,503	15,713	13,885
Coal	175,207	134,261	169,424
Coke	14,795	13,653	14,049
Forest products	42,894	43,755	50,406
Ore	67,478	53,391	78,997
Merchandise l. c. l.	107,213	97,577	112,736
Miscellaneous	390,911	383,842	383,221
April 29	851,857	788,789	858,911
April 22	839,954	794,163	861,357
April 15	799,965	780,908	846,505
April 8	789,324	789,019	814,096
April 1	787,525	772,102	829,038
Cumulative Total, 18 Weeks	14,159,749	13,585,962	14,366,109

In Canada.—Carloadings for the week ended April 29 totaled 71,455 as compared with 70,224 for the previous week and 63,832 cars for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
Apr. 29, 1944	71,455	38,023
Apr. 22, 1944	70,224	38,449
Apr. 15, 1944	68,037	37,705
May 1, 1943	63,832	39,670
Cumulative Totals for Canada		
Apr. 29, 1944	1,157,887	676,208
May 1, 1943	1,050,422	663,761
May 2, 1942	1,062,183	549,963

C. P. R. Plans to Withdraw from Air Transport

At the annual meeting of Canadian Pacific stockholders last week, President D. C. Coleman expressed disappointment at the recently-announced policy of the Dominion government which declares for a socialistic monopoly of air transportation in the Dominion and will force the C. P. R. to withdraw from its hopeful and successful venture into this field of transportation.

The C. P. R.'s case, he said, "was fully and strongly presented to the proper authorities. It was pointed out that the Cana-

dian Pacific Air Lines had made a distinct contribution to aviation in this country by taking over a number of struggling and scattered companies and welding them into a closely knit, efficient organization, without encroaching on the field reserved by law for Trans-Canada Air Lines; that it had proceeded throughout with the knowledge of the government, and in compliance with government regulations; and that it had been of substantial aid to the Canadian, United States and United Kingdom governments in operations in Northern Canada, Alaska and Labrador and in initiating the first Trans-Atlantic ferry service.

"We were given no encouragement to believe that the announced policy would be materially modified, and we are making our future plans in conformity with it."

Union Pacific Receives Safety Award

The National Safety Council's distinguished service to safety award and its "S" pennant were presented to the Union Pacific at a banquet at Omaha, Neb., on May 6. The presentation was made by W. A. Irvin, a member of the executive committee of the United States Steel Corporation and chairman of the board of trustees of the Council. W. M. Jeffers, president of the railroad, accepted on behalf of the employees. The award was made in recognition of the safety performance of the railroad, whose casualty rate among employees during 1943 was the lowest of all railroads.

"The Union Pacific," Mr. Irvin said, "has done a magnificent job of preventing accidents, because it is known that a sound safety program is the best way to keep men on the job."

Paying tribute to Mr. Jeffers' "wholehearted devotion to the cause of accident prevention," Mr. Irvin pointed out that the Union Pacific has maintained the lowest employee casualty rate of any large railroad in the United States during 16 of the past 21 years.

"You can be proud, too," he told the railroad employees, "that you have been able to maintain that top position in wartime and in the face of an 11 per cent increase in personnel. Lest we be too complacent about our accomplishments, however, too many lives still are being lost in accidents in this nation—and among railroad employees, too."

He said that Interstate Commerce Commission figures for last year indicated that 954 employees were killed and 43,633 injured on duty. "Had the Union Pacific's safety record been matched by all of the railroads, 401 of these lives would have been saved and more than 28,000 of these injuries avoided," he said. "Everybody knows and applauds the magnificent job the American railroads are doing in this war. They have been asked to do the impossible—and they have done it. But there are indications that some transportation companies, in meeting these huge wartime demands, are driving their men and equipment to the breaking point."

In accepting the award, Mr. Jeffers expressed his appreciation and said that his pride in the safety record is invested in the employees of the Union Pacific. "As a matter of fact," he declared, "during much of the time that this record was established, I was in Washington trying to keep from getting run over—and I attribute the fact that I was not run over to my experience with the Union Pacific. I am sure that I speak for every Union Pacific employee when I say that we are making an even stronger effort this year, despite the movement of an unprecented amount of war traffic, to prevent accidents and save manpower for warpower."

The presentation of the award was made in the presence of a number of guests. Among those introduced by F. W. Robinson, senior vice-president of the Union Pacific, were J. F. Mann, New York City, general counsel of the Union Pacific; Steve Hannagan, publicist and consultant on public relation matters; Claude A. Roth, trustee of the Chicago & North Western; R. L. Williams, president of the Chicago & North Western; Maj. Gen. C. H. Danielson, commanding officer of the Southern Service Command; J. M. Harding, associate publisher of the Omaha World Herald; D. A. Crawford, president of the Pullman Co.; F. W. Charske, New York City, chairman of the executive committee of the Union Pacific; T. L. Jones, vice-president of the Brotherhood of Maintenance of Way Employees; C. L. Darling, president of the American Train Dispatchers; C. J. MacGowan, president of the International Brotherhood of Boilermakers, Iron Shipbuilders and Helpers; Roy Horn, president of the International Brotherhood of Blacksmiths, Drop Forgers and Helpers; E. Rowland Harriman, director of the Union Pacific and a member of the board of trustees of the National Safety Council; W. Dale Clark, president of the Omaha National Bank and a Union Pacific director, and J. A. Donohoe, Federal district judge at Omaha.

(Left to Right) Colonel John Stillwell, President of the Safety Council, President Jeffers of the Union Pacific, and W. A. Irvin of the Council's Executive Committee

Representation of Employees

Reporting on results of a recent election among heretofore unrepresented yardmasters of the Ann Arbor, the National Mediation Board has certified that the American Railway Supervisors Association has been duly designated as the Railway Labor Act representative of such employees.

Rule for House Consideration of Land-Grant Repealer

The House rules committee on May 9 approved a rule for preferred consideration by the House of H. R. 4184, the land-grant-rate repealer reported favorably from the committee on interstate and foreign commerce last week. It was expected that the rule would be called up for consideration in the near future.

It provides for two hours debate, after which the bill would be open for amendments. As a preliminary to this, the rule itself may be debated for one hour when it is called up. Representative Boren, Democrat of Oklahoma, sponsor of the bill, and Representative Holmes, Republican of Massachusetts, appeared before the rules committee in support of the request for the rule.

Truckers Ask Higher Rail Rates

Opposition to a further extension for six months from July 1 of the suspension of the freight rate increases originally allowed by the Interstate Commerce Commission in its Ex Parte No. 148 proceedings has been expressed, for opposite reasons, in replies to the show cause order therein from the American Trucking Associations and a group of state railroad and utility commissioners.

The truckers' organization has asked the commission to allow the suspension to terminate on July 1 so that the higher rates may again become effective, thus again taking the position adopted last fall, when it argued that the financial position of the motor carriers required increased

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled From 131 Reports (Form IBS) Representing 135 Steam Railways
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways			
	For the month of February		For the two months of	
	1944	1943	1944	1943
1. Net railway operating income	$84,493,179	$105,834,245	$167,317,093	$210,923,392
2. Other income	13,172,828	11,465,770	27,633,139	25,068,692
3. Total income	97,666,007	117,300,015	194,950,232	235,992,084
4. Miscellaneous deductions from income	2,745,329	2,157,692	5,287,324	4,287,836
5. Income available for fixed charges	94,920,678	115,142,323	189,662,908	231,704,248
6. Fixed charges:				
6-01. Rent for leased roads and equipment	12,102,413	14,636,130	24,576,462	29,394,575
6-02. Interest deductions[1]	34,318,014	36,275,198	68,798,807	72,738,210
6-03. Other deductions	119,440	126,872	239,942	248,879
6-04. Total fixed charges	46,539,867	51,038,200	93,615,211	102,381,664
7. Income after fixed charges	48,380,811	64,104,123	96,047,697	129,322,584
8. Contingent charges	2,342,510	2,212,359	4,685,939	4,466,725
9. Net income	46,038,301	61,891,764	91,361,758	124,855,859
10. Depreciation (Way and structures and Equipment)	26,314,184	26,232,010	52,919,796	52,685,097
11. Amortization of defense projects	14,441,295	10,478,984	27,519,341	19,860,870
12. Federal income taxes	101,218,643	95,149,452	196,985,472	183,079,102
13. Dividend appropriations:				
13-01. On common stock	17,819,556	15,933,174	20,179,556	18,293,174
13-02. On preferred stock	2,516,440	2,600,500	5,080,128	5,211,921
Ratio of income to fixed charges (Item 5 ÷ 6-04	2.04	2.26	2.03	2.26

Selected Asset and Liability Items	All Class I Railways — Balance at end of February	
	1944	1943
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$590,545,098	$548,628,300
21. Cash	1,179,653,123	1,055,457,415
22. Temporary cash investments	1,901,110,849	972,040,581
23. Special deposits	192,638,188	127,818,625
24. Loans and bills receivable	210,344	335,345
25. Traffic and car-service balances—Dr.	48,410,932	43,762,871
26. Net balance receivable from agents and conductors	157,794,943	173,362,781
27. Miscellaneous accounts receivable	665,146,187	481,273,626
28. Materials and supplies	555,018,517	507,039,373
29. Interest and dividends receivable	23,105,126	17,811,638
30. Rents receivable	1,802,969	1,193,107
31. Other current assets	59,429,267	13,889,551
32. Total current assets (items 21 to 31)	4,784,320,445	3,393,984,913
40. Funded debt maturing within 6 months[2]	$113,761,313	$126,862,690
41. Loans and bills payable[3]	14,888,834	15,927,203
42. Traffic and car-service balances—Cr.	206,719,730	136,596,733
43. Audited accounts and wages payable	589,748,086	397,911,944
44. Miscellaneous accounts payable	115,092,155	79,812,910
45. Interest matured unpaid	45,698,082	48,286,334
46. Dividends matured unpaid	7,131,455	3,034,506
47. Unmatured interest accrued	72,212,537	77,803,959
48. Unmatured dividends declared	29,070,546	30,732,927
49. Unmatured rents accrued	22,672,924	23,811,727
50. Accrued tax liability	1,901,005,058	1,160,054,424
51. Other current liabilities	165,828,175	63,939,352
52. Total current liabilities (items 41 to 51)	3,170,067,582	2,037,912,019
53. Analysis of accrued tax liability:		
53-01. U. S. Government taxes	1,768,451,412	1,032,951,244
53-02. Other than U. S. Government taxes	132,553,646	127,103,180

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.
[3] Includes obligations which mature not more than 1 year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

rates, although the competitive situation prevented them from taking steps to make such a general increase effective unless rail rates also were increased. The reply filed by the National Association of Railroad and Utility Commissioners on behalf of 24 state commissions, on the other hand, asked the commission permanently to cancel the increases in freight rates allowed by it in Ex Parte 148 and later suspended.

As reported in *Railway Age* of May 6, page 860, the Association of American Railroads has informed the commission that the railroads will not oppose an extension of the suspension to January 1, 1945, although they have reserved the right to apply for an increase before that time, indicating that the action taken by Congress on the proposed repeal of the land-grant rate concessions on government traffic may have some bearing on their decision. In stating this position, the A. A. R. spoke for the Class I roads with the exception of the Central of New Jersey. The American Short Line Railroad Association also has indicated its intention not to oppose another six months' extension of the suspension.

March's Truck Tonnage Was Below March, 1943

Freight traffic handled by motor carriers reporting to American Trucking Associations, Inc., "slipped below the corresponding month of a preceding year for the first time since September, 1940," according to A. T. A.'s latest monthly report. Returns, received from 355 motor carriers in 47 states and the District of Columbia, showed that those truckers transported an aggregate of 2,906,229 tons in March, a drop of 0.3 per cent below March, 1943's 2,915,788 tons.

Meanwhile, the March total was 10.4 per cent above that of February, which, however, contained two less working days. The A. T. A. index, based on the 1938-40 average monthly tonnage of the reporting carriers was 187.5 for March as compared with February's 173.01.

House Bill to Give Study Board Four More Years

Representative Priest, Democrat of Tennessee, has introduced H. R. 4776 to extend the life of the Board of Investigation and Research for an additional four years—until September 18, 1948. As noted in the *Railway Age* of April 15, page 746, a like bill was previously introduced in the Senate by Senator Stewart, Democrat of Tennessee.

High Wages Obstacle to Full Employment

(Continued from page 908)

will find it difficult to remain solvent and render good service if they are forced to compete with highly favored and highly subsidized transportation agencies engaged in other forms of commercial transport. If the American people want to keep their railroads and want to keep them in good condition and reasonably profitable, then one of two things must happen: All subsidies and all favoritisms must cease—and that seems the best policy—or else railroads, where they elect to do so, ought to be permitted to engage in other forms of transportation. There are no other alternatives, except government ownership and control.

"There is a great deal of talk about the supposed discriminatory features of the southern freight rate structure. Such talk is largely political and, to a large extent, is founded on ignorance and prejudice. Very few of those who pay the freight have any complaints. The southern rate structure is not perfect—it changes constantly. This railway alone changes and reduces about three hundred freight rates a year to meet ever changing economic conditions. The present rate structure is best designed to promote the legitimate interests of the South as a whole. Whenever it can be shown that this is not true, the N. C. & St. L. will be glad to make the needed adjustments."

N. Y. Central Seeks Employees' Advice on Annual Reports

The New York Central has joined the growing list of railroads which are issuing special editions of their annual reports, designed particularly to meet the interests of employees. The New York Central employee's report is an 8-page pamphlet, which tells its story largely by means of graphs and illustrations—but basic information and figures are likewise given in the text.

A special feature of the distribution of this report to employees is the inclusion of a post-card, addressed to President Wil-

liamson (the company paying the postage) on which employees are asked to state their opinion of the report as to: clarity, form, whether they want such a report annually, and on what features they would like to have more information (i.e., operations, taxes, finances, employees or equipment).

Heavy Traffic Needed to Meet Present Costs

(*Continued from page 909*)

months, which means that, although high, revenues are not advancing as rapidly as last year."

Operating Ratio Climbs—Analyzing March's operating expenses, the statement notes that the operating ratio for the month was up to 66.2 from March, 1943's 59.4. For the first quarter the increase was from 61.3 to 67. Also, it is pointed out that recent 12-months periods ending with successive months "show a declining net railway operating income and declining net income both before and after deduction of federal income taxes."

Projecting the first quarter's results ahead to the end of the year, with allowances for seasonal variation, the Bureau calculates that the 1944 gross would be $9,436,000,000, the expenses $6,186,000,000, the net revenue before rentals and taxes, $3,250,000,000, and the net railway operating income $1,210,500,000. "This," the statement emphasizes, "is not a prediction of 1944 net earnings, but merely a statement of the results of the first quarter of 1944 on a 12-month basis. This is lower than the net railway operating income for 1942 and 1943, but larger than that for 1941, which was the best year between 1929 and 1942."

Like its predecessors of recent months the present statement has something to say about the accruals being made by railroads for the five-year amortization of defense equipment. When combined with the regular depreciation charge on the remainder of the equipment, such accruals, the Bureau asserts, "have the effect of greatly reducing the assumed life of the equipment as a whole, thereby giving substantial, if not excessive, recognition to the accelerated depreciation supposed to be associated with the use of equipment in war time."

Amortization Practice Varies—"The average depreciation rate on old equipment of Class I steam railways in 1942 was 3.4 per cent which corresponds with a life of about 27 years after allowing for salvage," the statement goes on. "But when amortized equipment and depreciated equipment are considered together the average life is reduced to about 17 years. The extent to which use is made of the amortization account varies greatly among the railways. For 12 large ones which in February charged more for amortization than for depreciation of equipment, the assumed average life of their equipment as a whole is around 12 or 13 years compared with the life of the depreciated parts alone of about 29 years."

Looking over rail and truck tonnage data, the Bureau sets up a table comparing percentage increases in the truck tons reported to the commission with those of the "manufactured and miscellaneous" tons originated by Class I roads. The table shows that "the percentages are generally somewhat higher for the rail tons in 1941 and the first half of 1942 but thereafter except for the last quarter of 1943 the percentages of increase are larger for the truck tons."

Not "Productivity of Labor"—In discussing car-miles per employee-hour and traffic units per employee-hour as measures of transportation output, the Bureau warns that reference to such indices as "showing the productivity of labor" is "somewhat misleading since the improvement in the averages may result from better tools of production and better management, or from a more complete utilization of the plant and equipment, as well as from greater labor effort."

Meanwhile figures presented in the statement show that the number of car-miles per employee-hour was 3.6 per cent greater in 1943 than in 1940 and the number of traffic units (revenue freight ton-miles plus twice revenue passenger miles) was up 47.2 per cent. After making the foregoing comment, however, the Bureau went on to note that the traffic units per dollar of investment (before deducting depreciation) at the beginning of the year was 112 per cent greater in 1943 than in 1940. It added:

"One could thus also say that there has been an increase in the productivity of capital. Actually, the total railway service produced is the product of the employees (including the management) working with the tools of production made available to them by the investor or by investment of the railroad company's surplus. It is difficult to separate the causes of an increase in productivity so as to show separately the amount of the change which was due to greater labor effort, better management, improved plant and equipment, or to change in other conditions."

Special Car Order 37 Calling Ventilated Box Cars

The Car Service Division, Association of American Railroads, has issued Special Car Order No. 37 to expedite the return home of ventilated box cars owned by the Atlantic Coast Line, Central of Georgia, Charleston & Western Carolina, Louisville & Nashville, Seaboard Air Line, and Southern. The purpose is to build up the car supply for the handling of watermelons and potatoes.

"Safety Legion" Now on National Scale

The Safety Legion of America movement, which had its origin on the Erie in 1928, has become a national enterprise, with a daily, except Saturday and Sunday, sustaining program over the Mutual Network. Following a school bus accident at a highway grade crossing near Leiters, Ind., in 1928, H. A. Daake. supervisor of safety of the Erie, who was then employed in the telegraph department, was invited to talk to a meeting of teachers and bus drivers of the county on proper safety measures when approaching a highway-railroad grade crossing.

This meeting led to others which Mr. Daake addressed, and to give continuity to the safety movement, Mr. Daake designed a membership card for distribution among school children which developed into the Safety Legion of America movement, of which Paul Grant of Chicago is now national director.

Interest in the program on the part of schools has encouraged its extension over the stations of the Mutual Broadcasting Co. Stars of the program are Colleen Moore and Jack Kirkpatrick, a former football star.

Errors in Streamliner Dates

Due to typographical errors in the issue of April 22, page 766, it was stated that the Pioneer Zephyr of the Chicago, Burlington & Quincy was placed in service on November 11, 1943. This, of course, should have read November 11, 1934. It was also stated on page 771 that the City of Salina was placed in revenue service on January 1, 1935. This should have read January 31, 1935.

Opposition Group Resuming Fight on Seaway

The Executive Committee of the National St. Lawrence Project Conference, meeting recently in Washington, D. C., decided that the time has arrived for the Conference "to renew its aggressive opposition" to the passage of any federal legislation looking to the completion of the proposed St. Lawrence seaway. Following through on this decision, Tom J. McGrath, executive director of the Conference, has issued a bulletin to advise members of developments in the current drive to secure Congressional approval of the project as a post-war measure.

As Mr. McGrath sees it, the proponents now confront the opponents with a "reasonably definite program." He outlines the situation as follows:

"On March 9, 1944, President Roosevelt wrote a letter to Senator Aiken [Republican of Vermont] in which he called for a 'nonpartisan effort' to bring about the consummation of the project and endorsed his bill as a proper medium to that end. His letter was followed closely by endorsements of the project by the Secretaries of State and War, the Federal Power Commission and the Bureau of the Budget. On April 18, 1944, Senator Overton [Democrat of Louisiana], chairman of the subcommittee to which the Aiken bill has been referred, stated to the Senate that after disposing of the rivers and harbors and flood control bills which were then before his committee, hearings would be commenced on the St. Lawrence legislation.

May Give Senate a Run-Around—"Our best information is that hearings will start about June 1. Although it has not as yet been definitely decided it is possible that the preliminary question as to whether the understanding with Canada should be considered as a treaty, and hence subject to ratification by a two-thirds vote of the Senate, or as an executive order, which may be approved by a majority of both houses, shall first be determined. In any event hearings on the merits of the bill may not be long delayed and for that reason I would suggest that witnesses who are to appear in opposition to the measure com-

News Department continued on next left-hand page

LIMA POWER

HAS STAYING POWER

No single factor has been more responsible for the outstanding wartime record made by American Railroads than locomotive utilization. As "Railway Age" reports, " . . . . It is a far cry from two decades ago, when locomotives were changed at every operating division, to the present-day practice, when they operate efficiently and effectively over several divisions, with changes in the engine crews."

Under conditions such as these the "staying power" of Lima-built locomotives has been proved conclusively.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

mence preparation of their statements without delay."

Later on Mr. McGrath expresses the view that the Administration and its supporters would not have launched the present drive "unless they intended to support such a movement with utmost vigor." Thus, he adds, "it behooves all members of the Conference, as well as their associates, to leave no stone unturned to bring to the attention of the Senate all of the factors which we believe demonstrate conclusively that the construction of the project would be decidedly harmful to the economic well-being of the country."

I.C.C. to Require Competitive Bidding

(*Continued from page 910*)

cipal amount; (5) exchange of securities in connection with a merger or acquisition of another railroad; (6) issues of subsidiary companies to be held by the parent company and not sold to the public; and (7) those excepted by the commission upon special application. The existing requirement of competitive bidding on equipment obligations is left in effect undisturbed.

The "more important questions" under consideration in the proceeding, the commission indicated, were whether the sale of railroad securities generally through competitive bidding (1) will produce higher prices and lower capital costs for railroads; (2) will afford wider distribution of their securities; (3) will deprive the roads' managements of the "expert advice" of investment bankers; (4) will adversely affect investors; (5) will result in inflexibility in the marketing of new issues; and (6) is necessary for the proper performance of the commission's duties under section 20a of the act, that part which sets forth the findings the commission shall make before approving the issue of securities or assumption of obligation in respect of securities by a railroad carrier. The report discussed each of these questions at some length.

Sees Lower Cost for Capital—Among the arguments advanced by supporters of the compulsory competitive bidding principle the majority's report recited these: It is the commission's duty to see that railroad capital is provided at lowest cost, and this will be the result of such a requirement; competitive bidding is no longer experimental, but is now the predominant method of marketing securities requiring approval of public authorities, and results in wider markets and lower costs to the issuers; the "failure of railroads generally to adopt this method is due to monopoly of their financing by two investment banking houses, viz, Morgan Stanley & Co. and Kuhn, Loeb & Co.," so that the requirement is necessary to break this monopoly and assure "arms-length bargaining"; and marketing uncertainties and the threat of "ill-advised legislation on the subject" will be removed. Opponents of compulsory competitive bidding, on the other hand, the majority continued, made these arguments against the requirement: There are innumerable and wide variations in the kind and quality of railroad securities, so that expert advice in marketing them is necessary; failure of a public offering of securities may "work irreparable injuries" to a company's credit; delays incident to the competitive bidding process may be hazardous in times of market fluctuations; the field of management would be invaded; and investors would be deprived of the protection afforded by investment bankers, some of whose functions and responsibilities would be shifted to the commission.

Private Negotiation Too Costly?—Its consideration of these arguments, and of the record in the proceedings, led the commission's majority to remark that "whether the railroads are paying too high a price for the alleged benefits of private negotiation is debatable. The probability is that they are. . . . Failure of railroads to avail themselves more frequently of their choice in methods of financing is due no doubt, in part at least, to a state of mind of railroad managements, and to their inclination to pursue a well-known and well-beaten path.

"While the charges and intimations of monopoly, banker domination, and lack of arm's-length bargaining have not been sustained," the report said further, "the fact is that many railroads continue to give most of their business to one or the other of two leading investment banking firms, and have failed or refused to investigate the possibilities of other avenues of financing.

"There is no conclusive evidence that competitive bidding in any given case would necessarily result in higher prices than could be obtained at a privately negotiated sale, or that it would always result in a fair and adequate price," the majority went on to say, "yet it is reasonable to believe that normally higher prices can be obtained at competitive bidding than at negotiated sales."

Remarking that it would be important to the railroads to be able to reach every section of the market under post-war conditions, the majority admitted "there is the possibility that if competitive bidding is extended to railroad securities generally access to an important part of the capital market may be closed to the railroads. However, in view of the fact that distribution is as important to investment bankers as it is to issuing companies, we think this possibility is remote." The advice and assistance of investment bankers would still be available to railroads under competitive bidding, the report asserted.

Commissioner Lee did not participate in the disposition of this case, while Chairman Patterson, while concurring in the majority report, also would require competitive bidding in the sale of common and preferred stocks. Commissioner Porter preferred to adhere to the principle the commission has followed since 1926, taking the position that "sale of securities at competitive bidding is suitable only for certain types of railroad securities, that it will not always result in a carrier receiving a fair and reasonable price . . . and that it may result in no bids being received and the failure of the issue at the time it is offered.

Porter Doubts Advantages—Under present conditions there are not many offers of high-grade securities and there is an abundance of capital seeking investment, he pointed out. But under the different conditions to be expected in the future, he went on to say, "it is doubtful whether any banking firm would be willing to devote the time and expense required to assist the borrower in preparing properly a new issue for distribution with no more tangible prospects of compensation than an opportunity to submit the most favorable bid at competitive bidding. . . . The outcome will be that two investment bankers will become involved in practically every issue, one banker and its counsel being paid a fee for professional service, and another banker assuming the market risk and expecting to be paid primarily and almost entirely for that function."

"We will continue to hold management responsible for the manner in which it conducts the financial affairs of the railroads," Commissioner Porter said further, "yet, if we require . . . competitive bidding, we will take from management the right to decide as to the best method of meeting its financial requirements and will, on occasion, substitute our judgment for the judgment of management."

Commissioner Miller expressed his general agreement with Mr. Porter's dissent, and added: "It is the sole duty of managements to conduct their transactions in the best interests of the stockholders. . . . While it seems to be generally true that many stockholders in railroads fail to take sufficient interest in their properties (and I take this opportunity to urge them to take a greater interest) it is nevertheless the fact that the stockholders can remove their officers and directors when dissatisfied with their management."

Nickel Plate Fined $1,000

Fines totaling $1,000 were imposed on the New York, Chicago & St. Louis in the federal court at Fort Wayne, Ind., on April 21, following the road's pleas of *nolo contendere* to each count of a 10-count information. This was announced in a May 6 statement issued by Secretary W. P. Bartel of the Interstate Commerce Commission.

Mr. Bartel explained that each count charged the defendant with having violated section 20 (7)(b) of the Interstate Commerce Act "by making false entries in certain waybills for shipments of livestock, . . . such entries, as alleged in the information, consisting of false statements to the effect that double-deck cars 36 ft. in length had been ordered by the consignors . . . and that double-deck cars 40 ft. in length had been furnished because the 36-ft. cars were not available, when in fact no orders for 36-ft. double-deck cars or for cars of any type had been ordered by the consignors."

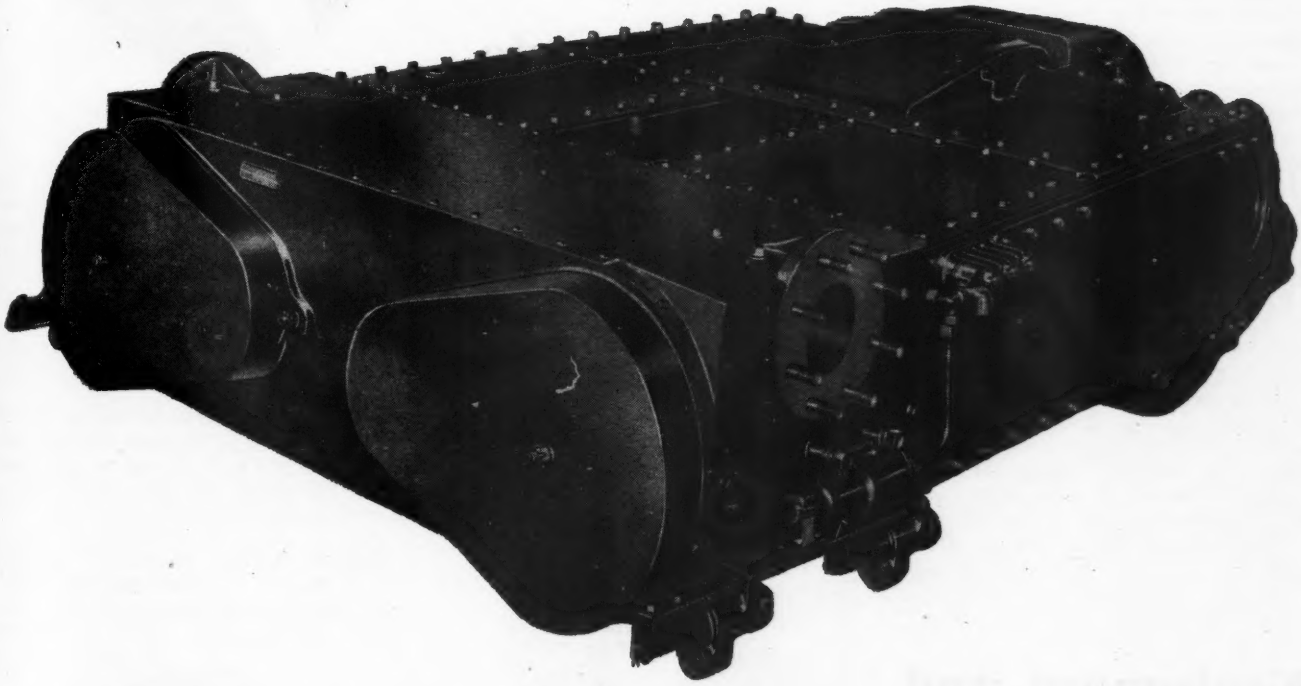
Western Lines Start School for Trainmen

A school to instruct inexperienced men in the duties of enginemen, firemen, brakemen, switchmen and telegraphers and thus aid in relieving the manpower shortage on Western railroads, will be opened in Chicago on May 22. Cooperating in the venture are the Chicago Board of Education, the Railroad Retirement Board, the

News Department continued on next left-hand page

MAXIMUM POWER

FROM THE NEW TYPE "E" BOOSTER*



RECOGNIZING the trend in locomotive design toward higher boiler pressures, and noting the many new factors in current steam locomotive operation, the new Type "E" Booster has been developed expressly to meet today's conditions.

For each Booster application the proper gear ratio is selected for a given boiler pressure, wheel diameter, and adhesive weight to obtain maximum Booster power. A special starting feature enables the new Type "E" Booster to develop full initial starting effort, and a new air control assures efficient Booster operation and engagement at higher speed. Dynamic balancing contributes to smooth operation, particularly at higher operating speeds, and the roller bearing crankshaft, securely housed in the engine bed, makes for smooth running, freedom from lost motion, and long life with minimum maintenance.

*Trade Mark Reg. U. S. Pat. Off.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

War Manpower Commission and the General Managers Association of Chicago. Under the plan of instruction, physically and mentally fit men between the ages of 19 and 45 years, will be selected by the Railroad Retirement Board and will be given a week of class room instruction in the Grand Central station and a week of field training under the jurisdiction of the Chicago Board of Education. After the two weeks of training and upon qualifying, the students will be hired by the railroads which they choose. It is planned to use retired railroad men for instructors.

Wages of Employees in International Service

An Order-in-Council amending Canada's Wartime Wages Control Order, 1943, which will make certain provisions of the order applicable to a larger group of employees regarded as in international railway service, was tabled in the House of Commons at Ottawa last week by Humphrey Mitchell, Minister of Labor.

Under the Wages Order, the Dominion War Labor Board may authorize wage increases to Canadians engaged in international railway train service. However, such wage increases may be granted only if the original rate was based on the wage paid by the same employer to persons doing similar work outside of Canada, and only when the wages paid to those outside of Canada are increased by competent authority.

It applies chiefly to Canadian citizens employed by the Wabash, Pere Marquette and Michigan Central operating through Southwestern Ontario.

The new amendment, by deleting the word "train" from the phrase "international railway train service," brings within the meaning of the Order railway employees other than those actually working on trains traveling between Canada and the United States.

Equipment and Supplies

FREIGHT CARS

The WHEELING & LAKE ERIE has ordered 500 box cars of 50 tons' capacity from the Ralston Steel Car Company and 500 gondola cars of 50 tons' capacity from the Bethlehem Steel Company. The Inquiry for this equipment was reported in the *Railway Age* of April 8.

PASSENGER CARS

The SEABOARD AIR LINE is inquiring for 25 passenger-train cars, including 15 coaches, 6 dining cars and 4 passenger-baggage cars.

SIGNALING

The SOUTHERN has placed a contract with the General Railway Signal Company for a unit-wire all-relay electric interlocking plant at John Sevier Yard, Tenn.

The MISSOURI PACIFIC has placed a contract with the General Railway Signal Company for materials to install absolute permissive block signaling between Coffeyville, Kan. and Wagoner, Okla., a distance of 76 miles. The order calls for 110 signals, 520 relays and incidental materials necessary to complete the contract.

The CANADIAN PACIFIC has placed a contract with the General Railway Signal company for materials for the installation of absolute permissive block signaling between Swift Current, Sask., and Maple Creek. The order includes: 118 type SA signals, governing 84 miles of territory, 35 model 7 switch circuit controllers, 380 type-K relays, 5 train order signals, 100 relay cases and miscellaneous material to complete the installation.

Supply Trade

International Harvester Creates New Divisions

The International Harvester Company, Chicago, in the development of its newly-formulated policy of decentralizing the operations of its business, has created a number of operating divisions, which in

H. T. Reishus

turn are subdivided into departments. These divisions are of two kinds,—a complete division, containing a manager of sales and a selling organization, and a partial division which sells its entire output to a general line sales department and consequently has no sales organization. The divisions already functioning are the Industrial Power, the Motor Truck, the Farm Tractor, the Farm Implement, the Steel and the Fibre and Twine.

Of these divisions, the Industrial Power and Motor Truck will have the closest contact with the railroads, the former handling the sale of tractors and engines and the latter the sale of trucks. In the Industrial Power division, **H. T. Reishus,** formerly district sales manager at Chicago, has been promoted to general manager; **Neal Higgins,** who has been in charge of industrial power sales, has been promoted to manager of sales; **G. A. Gilbert** and **W. M. Parrish,** who have handled industrial and manufacturers sales, respectively, have been

Neal Higgins

promoted to assistant sales managers; and **R. C. Flodin** has been appointed assistant to the manager of sales. In the Motor Truck division, **P. V. Moulder,** assistant to the second vice-president of truck sales, has been promoted to general manager and **W. C. Schumacker,** district sales manager of trucks has been promoted to sales manager.

The **Midvale Company** has announced that **Dr. Harry L. Frevert** will not consider re-election as chairman of the board, due to ill health, but will continue as a member of the board.

John W. White, vice-president and general manager of the **Westinghouse Electric International Company,** has been elected president and general manager to

John W. White

succeed **George H. Bucher,** who becomes chairman of the board. Mr. Bucher is president of the Westinghouse Electric & Manufacturing Co., the parent company. **William E. Knox,** formerly assistant general man-

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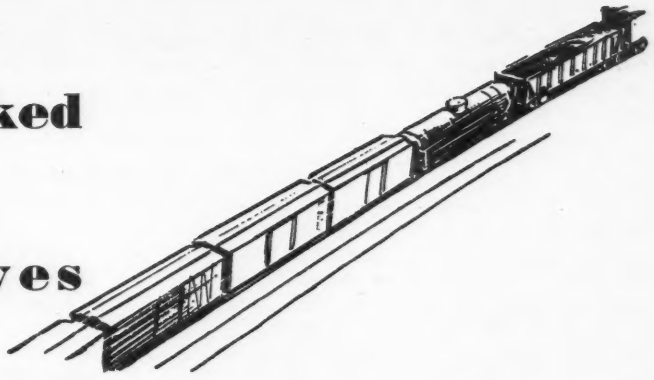
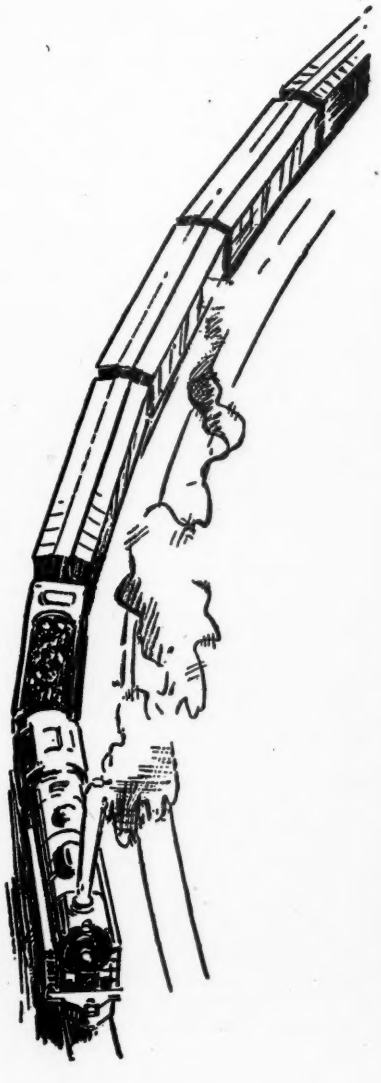
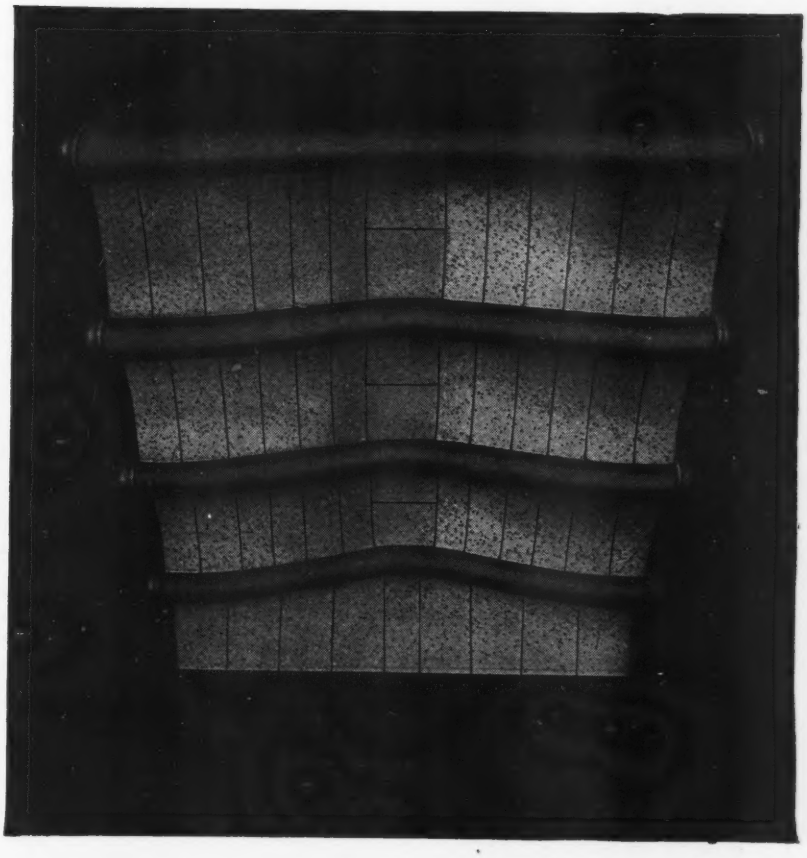
THE HARDER
The Locomotive Is Worked
THE MORE
The Arch Brick Saves



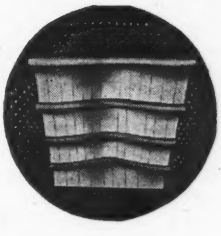
When locomotive runs were short and train speeds slow, the Security Arch showed substantial fuel savings. . . . With modern operation, involving long runs at high speeds, the Security Arch shows a greater economy. . . . Today the Security Arch costs less per 1,000 ton miles and is a more important fuel saving factor than it was when the service was less severe.





HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.

Locomotive Combustion Specialists

ager, has been elected vice-president of the International Company. Mr. White joined the Westinghouse Electric & Manufacturing Co. at its Pittsburgh, Pa., headquarters 39 years ago, and from 1907 to 1918, except for four years spent with another manufacturing company, was in the sales department in Pittsburgh, Detroit, Mich. and Chicago. He joined the Westinghouse Electric International Company in 1918, and for the following 18 years lived abroad, managing the company's affairs in the Caribbean area, in the Far East, and in South American countries. He returned to New York from Buenos Aires in 1927, when he was elected vice-president and general manager.

Mr. Knox was graduated from New Hampshire University in 1921. He enrolled

William E. Knox

in the graduate student course at the Westinghouse Company's East Pittsburgh, Pa., works and a year later was transferred as a sales clerk to the New York headquarters of the Westinghouse Electric International Company. He was appointed assistant to the general manager in 1932 and assistant general manager in 1937.

H. R. Rowland has been appointed manager of wrought iron hot rolled sales of the

H. R. Rowland

A. M. Byers Company. He was formerly manager of the Pittsburgh, Pa., division and has been associated with the Byers organization since 1915. **M. C. Morgan,** assistant to Mr. Rowland at Pittsburgh, has been appointed to succeed him as head of that division. He has been with the company since 1923.

D. M. Stembel has been named vice-president of the **Lockhart Iron & Steel**

D. M. Stembel

Co. Mr. Stembel was formerly manager of hot rolled sales for the A. M. Byers Company.

W. O. Everling, assistant director of research of the **American Steel & Wire Co.,** U. S. Steel subsidiary, has been appointed director of research, succeeding J. S. Richards, deceased, and has been succeeded by **R. H. Barnes,** division metallurgist.

OBITUARY

Michael J. Curtin, general superintendent and assistant works manager of the Philadelphia, Pa., machine tool plant of the William Sellers Company, died May 7. He was 46 years of age.

Construction

CHESAPEAKE & OHIO - NORFOLK & WESTERN.—Division 4 of the Interstate Commerce Commission has issued a report and order to resolve the conflicting applications for authority to build extensions to tap certain undeveloped coal resources near the Virginia-Kentucky border put before it by the Norfolk & Western and by the Levisa River, a subsidiary of the Chesapeake & Ohio.

In 1929 the Levisa River was authorized to construct a 28-mile line from Millard, Ky., to the Virginia-Kentucky state line, following the Levisa river. This line was never completed, and extensions of the time for its completion were granted from time to time by the commission, the last expiring December 31, 1944. Meanwhile, a state highway has been built over a substantial part of the right-of-way of the proposed line, and "it appears to be conceded that for a minimum of 4.8 miles the highway will offer interfence to railroad construction." The cost of the Levisa River's project was estimated at $4,804,000 at the time it was approved.

The Norfolk & Western on October 7, 1943, applied for authority to build an extension from the present terminus of its Levisa branch at the state line to a point 10.74 miles west, in Kentucky, which also would follow the Levisa river and a tributary, and serve the territory which the Levisa company's line would enter. This application was opposed by the C. & O., while the N. & W. asked for the revocation, in whole or in part, of the certificate authorizing the C. & O.'s subsidiary to construct.

The controversy "arises from the desire of each of these carriers to develop new coal-producing areas as others are exhausted," according to the report, which goes on to say that, "at about the time, or immediately after, the Norfolk & Western filed its application for authority to construct a line into the territory, the Levisa company concluded that the time was propitious for resuming construction of its line. It thereupon began certain grading work at a point about 0.5 miles from the Virginia-Kentucky state line, . . . that part of its line which normally and logically would have been completed last."

The division found that public convenience and necessity require that the Norfolk & Western's application be granted, since it had been supported by shippers who "desire and demand" its service, and "will provide the best assurance that a railroad will be built in this area and that the territory will be developed." The Levisa River had contended that the commission was without authority to revoke or modify its certificate authorizing construction over the same route, which the division found "would result in wasteful construction and duplication of facilities," since it regarded such a certificate as an irrevocable contractual and proprietary right, and it further contended that the commission has not been specifically delegated the power to revoke or modify certificates authorizing construction.

The division held, however, that, under the circumstances in this case, it had such power, pointing out that "the evidence in this proceeding establishes that the Levisa company had no immediate intention of resuming construction of its line, and . . . still has no definite prospects for the movement of traffic." Moreover, it added, extensions of the effective date were granted from time to time "upon an incomplete showing of facts," which "clearly implied that the sums of money indicated as having been spent from time to time were in fact spent in furtherance of the project itself," whereas they were, it developed, "merely accruals of interest on money expended largely before the certificate was issued."

On condition that the N. & W. offer to purchase the Levisa River's right-of-way, so far as the two routes are the same, at actual cost, including improvements, subject to acceptance within 60 days, the division has authorized it to construct the specified 10.74-mile line, and has revoked the Levisa company's certificate as to that segment of its proposed route which would be duplicated by the line to be built by the N. & W.

News Department continued on next left-hand page

RUSSIA

The program for steam locomotives under U. S. Army supervision, includes locomotives for Russia. The first of these locomotives was recently completed and started on its way with "Hail to Victory" by Soviet General L. G. Rudenko.

All of the locomotives will be equipped with steam superheaters designed and built by this company.

KEEP ABREAST OF SUPERHEATER DEVELOPMENT WITH ELESCO.

A-1649
(3010)

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

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Financial

ATLANTA, BIRMINGHAM & COAST.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other fixed charges, of $553,542, as compared with a net income of $235,563 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
RAILWAY OPERATING REVENUES	$7,211,296	+$1,176,206
Maintenance of way and structures	1,001,879	+24,345
Maintenance of equipment	1,002,815	+119,849
Transportation	2,702,440	+383,859
TOTAL OPERATING EXPENSES	5,312,000	+574,230
Operating ratio	73.66	–4.84
NET REVENUE FROM OPERATIONS	1,899,296	+601,977
Railway tax accruals	967,353	+372,027
RAILWAY OPERATING INCOME	931,943	+229,950
Equipment rents—Net Dr.	418,126	+24,457
Joint facility rents—Net Cr.	1,165	+3,878
NET RAILWAY OPERATING INCOME	514,982	+209,371
Total other income	50,709	+17,000
TOTAL INCOME	565,691	+226,371
Income Balance Transferred to earned surplus	553,542	+235,563

ATLANTIC COAST LINE.—*Acquisition of Subsidiaries.*—This company has applied to the Interstate Commerce Commission for authority to acquire the property of the Moore Haven & Clewiston and the Washington & Vandemere, each of which it now controls through stock ownership and operates under lease.

BALTIMORE & OHIO.—*Accepts Equipment Bid.*—The B. & O. has accepted a bid by the Girard Trust Company, of an interest rate of 1⅝ per cent on $1,200,000 of equipment notes, payable in 40 equal quarterly installments. Issuance of the notes is subject to the approval of the Interstate Commerce Commission. (See previous item in *Railway Age* of April 29, page 836.)

ATLANTIC COAST LINE.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other charges, of $17,480,959, as compared with a net income of $22,619,355 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
RAILWAY OPERATING REVENUES	$153,601,015	+$38,492,195
Maintenance of way and structures	12,195,507	+4,110,409
Maintenance of equipment	20,526,156	+3,998,581
Transportation	42,554,306	+9,854,585
TOTAL OPERATING EXPENSES	81,782,633	+18,835,002
Operating ratio	53.24	–1.45
NET REVENUE FROM OPERATIONS	71,818,383	+19,657,194
Railway tax accruals	51,250,000	+23,350,000
RAILWAY OPERATING INCOME	20,568,383	–3,692,806
Equipment and joint facility rents—Net Dr.	4,863,526	+1,797,904
NET RAILWAY OPERATING INCOME	15,704,857	–5,490,710
Total other income	8,081,439	–288,516
TOTAL INCOME	23,786,296	–5,779,226
TOTAL FIXED CHARGES	5,900,567	–660,575
NET INCOME	17,480,959	–5,138,396

BALTIMORE & OHIO.—*Trackage Rights.*—In connection with the construction by the Baltimore & Ohio of a 3.02-mile line from Cowen, W. Va., to Donaldson, recently authorized by the Interstate Commerce Commission, Division 4 of the commission has authorized the B. & O. to abandon operation under trackage rights over the line of the Cherry River Boom & Lumber Co. from Donaldson to Allingdale when the new line is put in operation, and has approved continued operation under trackage rights, with modified terms, over the lumber company's line from Donaldson to Scotti Junction, 24.19 miles.

BESSEMER & LAKE ERIE.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other charges, of $1,483,223, as compared with a net income of $2,599,545 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
Average Mileage Operated	213.77	.....
RAILWAY OPERATING REVENUES	$19,766,661	–$1,706,727
Maintenance of way and structures	1,853,675	–114,073
Maintenance of equipment	9,199,814	+1,595,673
Transportation	3,813,150	+158,284
TOTAL OPERATING EXPENSES	15,651,218	+1,611,946
Operating ratio	.....	.....
NET REVENUE FROM OPERATIONS	4,115,443	–3,318,673
Railway tax accruals	3,656,559	–1,490,945
RAILWAY OPERATING INCOME	458,885	–1,827,728
Net Rents—Cr.	1,813,073	+667,616
NET RAILWAY OPERATING INCOME	2,271,958	–1,160,112
Total other income	94,495	–15,922
TOTAL INCOME	2,366,453	–1,176,034
Rent for leased roads	10	.....
Interest on funded debt	796,744	–40,681
TOTAL FIXED CHARGES	829,696	–55,604
NET INCOME	1,483,223	–1,116,321
Disposition of net income:		
Dividends	920,640	–500,750
Miscellaneous appropriations	.....	–149
Income Balance Transferred to Earned Surplus	562,583	–615,423

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Reorganization Expenses.*—Division 4 of the Interstate Commerce Commission has approved maximum amounts of allowances for compensation and expenses in connection with this road's reorganization for the period from May 16, 1940, to August 31, 1943. The total amount of claims filed was $748,152, of which the division approved $502,276. The largest claim was that of Sidley, McPherson, Austin & Burgess, counsel for the so-called institutional investors, for $106,915, of which the division approved $101,915. Other large claims included those of Eckhart, Klein, McSwain & Campbell for $28,650, on which was allowed $14,074; F. C. Nicodemus, Jr., H. Brua Campbell, and A. Perry Osborn, counsel for the debtor company, for $51,518, on which was allowed $28,262; Shulman, Shulman & Abrams, counsel for certain owners of convertible adjustment mortgage bonds, for $24,014, on which was allowed $3,730; Hodges, Reavis, Pantaleoni & Downey, counsel for the committee for the 50-year 5 per cent bonds, for $35,917, on which was allowed $26,540; F. J. Moses, counsel for the so-called university group of general mortgage bondholders, for $40,000, on which was allowed $25,000; Oliver & Donnally, counsel for the mutual savings bank group, for $40,000, on which was allowed $35,000; Guaranty Trust Co., trustee of the 50-year mortgage, for $25,412, on which was allowed $15,385; Davis Polk Wardwell Sunderland & Kiendl, counsel for this trustee, for $67,432, on which was allowed $37,432; United States Trust Co., trustee of the general mortgage, for $33,463, on which was allowed $15,463; and Stewart & Shearer, counsel for this trustee, for $39,240, on which was allowed $26,740.

CHESAPEAKE & OHIO.—*Control by Alleghany Corp.*—The hearing ordered by the Interstate Commerce Commission in its No. 29085 proceeding to investigate the extent of the control exercised over the Chesapeake & Ohio by the Alleghany Corp., and particularly to determine whether such control was acquired subsequent to the enactment, and in violation, of paragraph (4) of section 5 of the Interstate Commerce Act, has been set for June 26 at Washington, D. C.

CHICAGO & NORTH WESTERN.—*Reorganization.*—Reorganization of the Chicago & North Western moved a step closer to completion on May 5 when the Federal District Court at Chicago took under advisement two petitions by the reorganization managers. One seeks approval of various documents necessary to the consummation of the reorganization plan and the other asks for authorization to organize the new company as a Wisconsin corporation. The documents referred to in the first petition include the various mortgage indentures, the new stock certificates, the voting trust agreement and the proposed bylaws of the new company. The second petition asks leave to terminate the debtor's existence as a domestic corporation in Illinois and Michigan, and take the legal steps necessary to permit the new company to operate as a domestic corporation in Wisconsin and as a foreign corporation in Illinois and Michigan.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization Plan Upheld.*—The Interstate Commerce Commission has denied requested modifications of the revised plan for this road's reorganization recently approved by it, as outlined in *Railway Age* of January 15, page 212. In so doing, it pointed out that the road's present cash position and current income had been taken into consideration in shaping that plan. On its own motion, the commission did order

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slight modifications of the plan with respect to retirement accounting.

CHICAGO, ROCK ISLAND & PACIFIC.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other charges, of $24,126,918, as compared with a net income of $22,234,225 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
Average Mileage Operated	7,756.48	−144.78
RAILWAY OPERATING REVENUES	$176,644,686	+$39,577,548
Maintenance of way and structures	19,685,660	+5,022,440
Maintenance of equipment	24,234,756	+4,523,176
Transportation	50,549,136	+9,182,017
TOTAL OPERATING EXPENSES	104,975,106	+20,385,862
Operating ratio	59.43	−2.28
NET REVENUE FROM OPERATIONS	71,669,580	+19,191,686
Railway tax accruals	29,090,642	+17,625,194
RAILWAY OPERATING INCOME	42,578,937	+1,566,492
Equipment rents—Balance Dr.	4,428,200	+1,175,438
Joint facility rents—Balance Dr.	1,355,755	+153,182
NET RAILWAY OPERATING INCOME	36,794,983	+237,872
Non-operating income	1,092,349	+543,562
TOTAL INCOME	37,887,332	+781,433
Rent for leased roads and equipment	187,932	−10,420
Total interest	13,297,237	−232,861
NET INCOME TRANSFERRED TO EARNED SURPLUS	24,126,918	+1,892,693

DELAWARE, LACKAWANNA & WESTERN.—*Leased Lines Merger.*—At the annual meeting, William White, president, told stockholders that considerable progress has been made by the Lackawanna toward merger with its leased lines and that consolidation of all leased lines on basis so far agreed on would reduce fixed charges about $1,100,000 annually. He reported also that there was very little prospect of a dividend on the D. L. & W. common stock for several years and that the railroad's chief problem now was to reduce fixed charges.

GULF, MOBILE & OHIO.—*Substitution of Equipment.*—Division 4 of the Interstate Commerce Commission has authorized this road to substitute under its 1941 equipment trust 123 50-ton gondola cars in lieu of 116 box cars not delivered.

ILLINOIS CENTRAL.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other charges, of $24,980,733, as compared with a net income of $24,773,391 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
RAILWAY OPERATING REVENUES	$247,637,580	+$34,611,158
Maintenance of way and structures	36,048,000	+7,227,111
Maintenance of equipment	43,197,397	+3,396,989
Transportation—rail line	69,473,608	+8,156,133
TOTAL OPERATING EXPENSES	159,790,230	+20,308,861
Operating ratio	64.53	−0.95
NET REVENUE FROM OPERATIONS	87,847,350	+14,302,297
RAILWAY OPERATING INCOME	44,302,582	−2,662,260
Hire of equipment—Balance Dr.	6,170,801	+212,815
Joint facility rents	1,801,159	−8,755
NET RAILWAY OPERATING INCOME	38,260,956	−2,746,964
Total other income	1,071,697	−336,593
TOTAL INCOME	39,332,653	−3,083,557
Rent for leased roads and equipment	744,159	−326,273
Interest on funded debt	13,203,351	−1,345,826
TOTAL FIXED CHARGES	14,142,258	−1,780,596
NET INCOME	25,129,122	+215,031
Disposition of net income: Income applied to sinking funds	148,390	+7,690
Balance transferred to profit and loss	24,980,733	+207,341

KANSAS CITY SOUTHERN.—*New Directors Elected.*—As a result of attempts by financial interests in Kansas City and the Middle West to obtain control of the Kansas City Southern, a compromise slate of directors was elected at the annual meeting of that road's stockholders, held at Kansas City, Mo., on May 9. Eight new directors were chosen as follows: John D. Ewing and R. T. Moore, of Shreveport, La.; James J. Lynn and Grant Stauffer, of Kansas City, Mo.; Joseph R. Brown, Ft. Smith, Ark.; Samuel E. Gilinsky, Omaha, Neb.; Johnson O. Couch, assistant vice-president, traffic, K. C. S., representing the Couch interests; and John E. Bierwirth, president of the New York Trust Company. Retained directors were W. N. Deramus, president of the K. C. S.; E. F. Swinney and R. Crosby Kemper, of Kansas City; C. S. McCain, L. C. Coogan, Edwin M. Allen, M. Livingston Delafield, Cmdr. Charles E. Ames and Henry Hazen Reed, of New York, and Robert V. White of Philadelphia.

MISSOURI PACIFIC.—*St. L. B. & M. Trackage Rights.*—Division 4 of the Interstate Commerce Commission has authorized the St. Louis, Brownsville & Mexico to operate over the Gulf, Colorado & Santa Fe from Houston, Tex., to Algoa, 24.32 miles, under a revised trackage rights agreement extending an arrangement that has been in effect since 1908, but with terms modified in recognition of the installation of centralized traffic control and other improvements by the owning road, at a cost of $259,600, the net result of which will be an annual saving of some $40,000 to the St. L. B. & M.

NEW YORK & LONG BRANCH.—*New Directors.*—Four new directors were elected to the board of the New York & Long Branch at the annual stockholders' meeting on May 6. The 40-mile line is jointly owned by the Central of New Jersey and the Pennsylvania. The new directors are: Horace K. Corbin, president of the Fidelity Union Trust Company of Newark, N. J.; Peter H. Tuttle, mayor of Spring Lake Heights, N. J., and president of the Tuttle-Dovey Coal Mining Company of New York; E. Donald Sterner, president of the Sterner Coal & Lumber Co. of Balmar, N. J.; and Shelton Pitney, a trustee of the Jersey Central.

SEABOARD AIR LINE.—*Reorganization Plan.*—The Seaboard Railway Company, organized to become the successor to the Seaboard Air Line upon the termination of that road's receivership, has asked the Interstate Commerce Commission to act promptly on its application for approval of the reorganization plan already approved by the courts, warning that further reorganization proceedings under section 77 may become necessary if there is long delay in carrying out the plans.

Average Prices Stocks and Bonds

	May 9	Last week	Last year
Average price of 20 representative railway stocks..	39.58	39.50	37.59
Average price of 20 representative railway bonds..	87.73	87.71	78.28

Dividends Declared

Albany & Susquehanna.—$3.75, payable July 1 to holders of record June 15.

Catawissa.—1st and 2nd preferred, 80¢, semi-annually, payable May 23 to holders of record May 8.

Cleveland & Pittsburgh.—Special, 50¢, quarterly, payable June 1 to holders of record May 10.

Troy & Greenbush.—$1.75, semi-annually, payable June 15 to holders of record June 1.

Virginian.—62½¢, quarterly, payable June 22 to holders of record June 9.

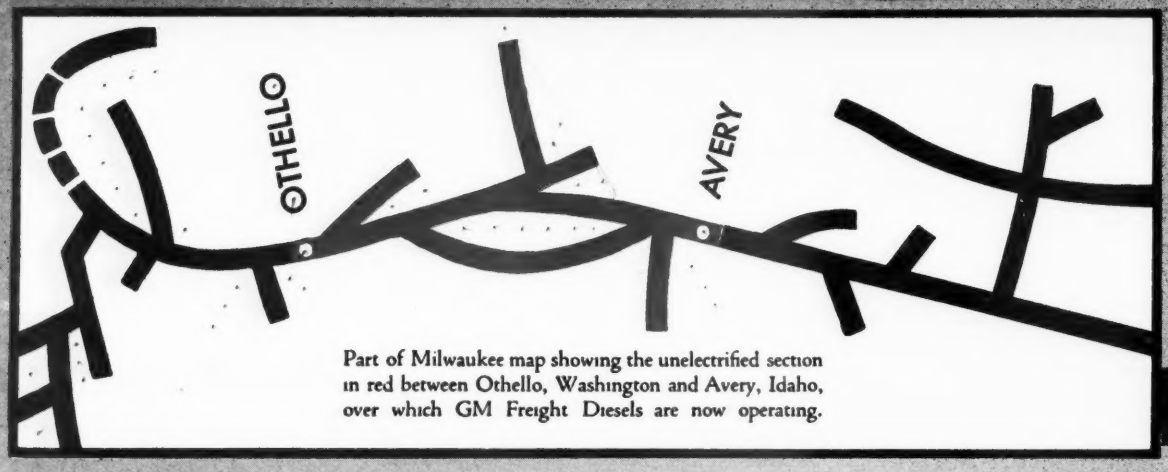
Abandonments

BOSTON & MAINE.—This road has applied to the Interstate Commerce Commission for authority to abandon the more northerly of its two main lines from North Berwick, Me., to Biddeford, 17.88 miles, in order that the more advantageous alternate line may be more intensively used.

CHESAPEAKE & OHIO.—This company has applied to the Interstate Commerce Commission for authority to abandon its so-called Rock Lick subdivision, extending 1.4 miles from Rock Lick Junction, W. Va., into a coal mining area that has ceased substantial production.

SOUTHERN PACIFIC.—In a proposed report Examiner J. S. Prichard has recommended that the Interstate Commerce Commission deny the Southern Pacific Company's application for authority to abandon operation over a line from San Bernardino, Calif., to a point in Colton, 3.09 miles, a portion of which is owned by its subsidiary, the Pacific Electric, which company has sought the commission's authority to purchase the line of the Southern Pacific Railroad between these points and to operate exclusively where both heretofore have operated. The examiner pointed out that "the case presents a situation wherein a subsidiary of a parent company seeks to pay another subsidiary of that company the full value for properties that afterwards may be legally seized and sold in satisfaction of the former's debts," this being the result, he indicated, of the line that Pacific Electric would acquire remaining subject to the S. P. Railroad's first refunding mortgage.

Bridging the
with GM FRE



Part of Milwaukee map showing the unelectrified section in red between Othello, Washington and Avery, Idaho, over which GM Freight Diesels are now operating.

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

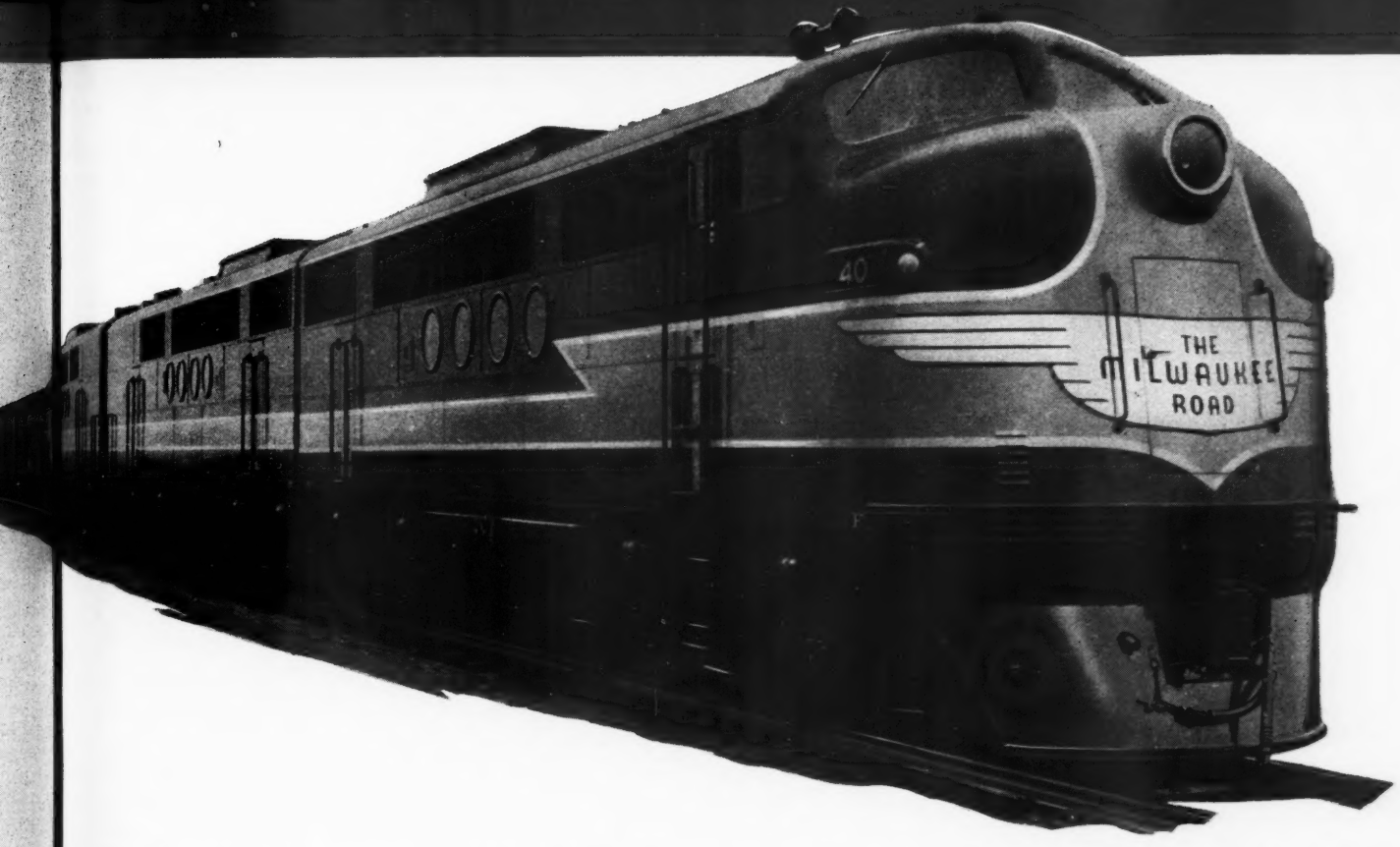
GENERAL MOTORS LOCOMOTIVES

ELECTRO-MO

GENERAL MOTORS CORPORATION

...Up...

...EIGHT DIESELS



BETWEEN the two sections of the Milwaukee Road's electrified line in the Rocky and Cascade Mountains, totaling 656 miles, there remained a very difficult 226-mile mountain division from Avery, Idaho to Othello, Washington, full of grades and curves necessitating many slow-downs. The wartime need for faster freight movements brought this condition into unusual prominence and Milwaukee officials were quick to seek a remedy. They found the answer in two 5400 Hp. GM Diesel Freight Locomotives, which now bridge the gap between the two electrified sections without congestion and with such dispatch that if heavier war needs arise additional tonnage can be handled. Additional GM Freight Diesels now on order will prove invaluable in postwar rehabilitation.

The Milwaukee is now operating GM Diesels in all three classes of service — switching, passenger and freight.

★ ***LET'S ALL BACK THE ATTACK — BUY MORE WAR BONDS*** ★

DIVISION

LA GRANGE, ILLINOIS, U. S. A.

Railway Officers

EXECUTIVE

F. R. Gerard, vice-president and general manager of the Lehigh Valley, with headquarters at Bethlehem, Pa., has been named vice-president, operation and maintenance. His former position has been discontinued.

William H. Wenneman, vice-president of the Chesapeake & Ohio, with headquarter at Cleveland, Ohio, has been elected vice-president of the New York, Chicago & St. Louis (Nickel Plate), and of the Pere Marquette. A biographical sketch and photograph of Mr. Wenneman appeared in the *Railway Age* of April 1, at the time of his election as vice-president of the Chesapeake & Ohio.

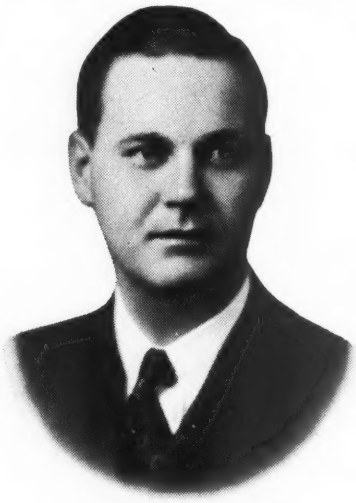
M. Hurt Ramsey, whose appointment as assistant to vice-president of the Southern and vice-president of its subsidiary lines, was announced in the *Railway Age* of April

M. Hurt Ramsey

15, entered railway service in 1907, when he was employed by the Southern as a messenger. After serving in many positions in the operating and other departments, he was appointed a special traveling auditor in November, 1920. In June, 1927, Mr. Ramsey became auditor for the Chattanooga Traction Company, a subsidiary of the Cincinnati, New Orleans & Texas Pacific, at Chattanooga, Tenn., and later was promoted to superintendent and president of the company. On July 1, 1937, Mr. Ramsey was named superintendent of the Blue Ridge, with headquarters at Anderson, S. C., a position which he held until his transfer earlier this year to Hickory, N. C., as superintendent of the Carolina and Northwestern and Yadkin (Southern subsidiaries). He continued in the latter capacity until his recent appointment as assistant to vice-president of the Southern and vice-president of its subsidiaries.

OPERATING

Oliver B. Keister, Jr., whose promotion to superintendent of the Mobile division of the Southern, with headquarters at Selma, Ala., was reported in the *Railway Age* of April 15, was born at Knoxville, Tenn., on December 9, 1914, and graduated from the University of Tennessee in 1936.



Oliver B. Keister, Jr.

He entered railway service with the Southern on July 15, 1936, as a student apprentice, and in July, 1937, he was promoted to assistant track supervisor of the Knoxville division, being advanced to assistant trainmaster of the Columbia division in October of the same year. On December 12, 1938, Mr. Keister was promoted to trainmaster, with headquarters at Winston-Salem, N. C., and on February 21, 1941, he was transferred to Richmond, Va. On November 1 of the same year he was transferred to Charlottesville, Va., remaining in that location until his new appointment.

Paul C. Raissle, whose promotion to the position of superintendent of the Birmingham Terminal Company was announced in the *Railway Age* of April 15, was born at Washington, D. C., on January 16, 1893, and began work for the Southern there in

Paul C. Raissle

1907 as a messenger in the telegraph office. After serving in various clerical positions at the Washington office, he went to Charlotte, N. C., in 1917 as secretary to the general superintendent of transporation, later becoming secretary to the general superintendent, with headquarters at Birmingham, Ala. He was appointed assistant yardmaster at Ensley, Ala., in 1922, and was named yardmaster at Birmingham in May of the following year. Mr. Raissle was appointed terminal trainmaster at Birmingham in April, 1943, continuing as such until his present promotion to superintendent of the Birmingham Terminal Company.

John Wahlen has resigned as general manager of the Springfield Terminal, after 62 years of service in the railway industry.

James I. MacKay, whose promotion to general superintendent of the Manitoba district of the Canadian Pacific, with headquarters at Winnipeg, Man., was reported in the *Railway Age* of May 6, was born at Picton, N. S., on May 28, 1891, and entered railway service as a junior clerk of the Canadian Pacific at Vancouver, B. C., in May, 1904. He held several minor positions at Vancouver until 1909 when he was appointed chief clerk of the car service department, with the same headquarters, and on June 1, 1912, he was appointed assistant chief clerk of the general superintendent, with headquarters at Winnipeg. Later he

James I. MacKay

served as acting car service agent at Vancouver, and in 1920 he became chief clerk of the general superintendent, with the same headquarters. On January 1, 1926, Mr. MacKay was promoted to assistant superintendent of transportation, with headquarters at Moose Jaw, Sask., returning to Vancouver later in the same year as chief clerk of the general superintendent. On May 15, 1928, he was advanced to assistant to the general superintendent, with the same headquarters, and in 1930 he was promoted to division superintendent, with headquarters at Nelson, B. C., being subsequently transferred successively to Regina, Sask., Calgary, Alta., and Edmonton. Mr. MacKay remained in the latter location until his new appointment.

J. C. Jones, assistant division superintendent of the Canadian Pacific, with headquarters at Prince Albert, Sask., has been advanced to superintendent of the Edmonton division, with headquarters at Edmonton, Alta., succeeding **J. I. MacKay,** whose promotion to general superintendent of the Manitoba district, with headquarters at

Winnipeg, Man., is reported elsewhere in these columns.

A. G. Emery has been appointed general superintendent of the Montpelier & Wells River and the St. Johnsbury & Lake Champlain, succeeding **J. W. Brackett,** who has resigned.

J. A. Avery has been appointed general manager of the Chattahoochee Valley, replacing **R. F. Lanier.** Mr. Lanier, president and general manager, has entered military service, but will continue as president during his leave of absence.

R. W. Buchanan, assistant superintendent of dining car service of the Chesapeake & Ohio, with headquarters at Cincinnati, Ohio, has been promoted to superintendent of dining car service, with the same headquarters, succeeding **J. W. Everett,** who has retired after 50 years' service.

FINANCIAL, LEGAL AND ACCOUNTING

F. R. Cross, assistant general attorney of the Baltimore & Ohio, with headquarters at Baltimore, Md., has been promoted to the position of general attorney.

C. W. Maloney, chief clerk of the freight claim department of the Union Pacific, with headquarters at Portland, Ore., has been promoted to freight claim agent, with the same headquarters.

R. H. Postans has been appointed auditor of miscellaneous accounts of the Canadian Pacific, with headquarters at Montreal, Que. He succeeds **R. T. Hooper,** who has retired.

Joseph A. McClain, Jr., whose election as vice-president and general counsel of the Terminal Railroad Association of St. Louis, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of April 8, was born at Ringgold, Ga., on May 1, 1903, and received his higher education at Mercer University and Yale University. He practiced law in the state of Georgia from 1924 to 1926 and in the latter year he was appointed dean of the Mercer University law school. In 1934 he was appointed dean of the University of Louisiana law school, and two years later he accepted a similar position with the Washington University, St. Louis. Mr. McClain entered railway service on October 1, 1942, as general counsel of the Terminal Railroad Association of St. Louis, holding that position until his new promotion.

TRAFFIC

F. T. Foy, district freight agent of the Canadian Pacific at Washington, D. C., has been transferred to Philadelphia, Pa., in that position.

The joint general freight agency at New York, the joint general agency at Pittsburgh, Pa., and the joint agency at Allentown, Pa., of the Reading and the Central of New Jersey, all have been discontinued. **Beeber Gross** has been appointed general agent of the Reading at New York, and **B. W. Dixon** has been named to that position at Pittsburgh. **J. G. Vandegrift** has been appointed division freight agent at Allentown, Pa.

R. I. Wells, general merchandise agent of the Missouri Pacific Lines, with headquarters at St. Louis, Mo., has been promoted to assistant to the chief traffic officer, with the same headquarters, succeeding **D. Rice Lincoln,** who has retired after 50 years service.

Richard E. Drummy, whose promotion to freight traffic manager of the Union Pacific, with headquarters at Omaha, Neb., was reported in the *Railway Age* of April 22, was born at Omaha, Neb., in 1891 and entered railway service in 1910 as a stenographer of the general passenger department of the Union Pacific in that city. He served in various capacities in Chicago and New York and in 1918 he was transferred to Washington, D. C., where he remained throughout the period of federal control. In 1923 Mr. Drummy was appointed traveling freight and passenger agent, with headquarters at Fresno, Cal., and four years later he was promoted to general agent at Santa

Richard E. Drummy

Ana, Cal., being transferred to Riverside, Cal., in 1929. On April 1, 1943, Mr. Drummy was advanced to assistant traffic manager, with headquarters at Los Angeles, Cal., the position he held at the time of his new appointment.

Following the discontinuance of the joint freight traffic agencies of the Reading and the Central of New Jersey at Chicago, St. Louis, Mo., and Cleveland, Ohio, as reported in the *Railway Age* of April 29, the following appointments have been made by the Reading: **E. W. Girton,** general western freight agent, with headquarters at Chicago; **Emmett E. McConnell,** general agent, with headquarters at St. Louis, and **W. J. Brennan,** general agent at Cleveland.

ENGINEERING & SIGNALING

James T. Derrig, whose promotion to assistant chief engineer of the Northern Pacific, Lines West of Garrison, Mont., with headquarters at Seattle, Wash., was reported in the *Railway Age* of April 22, was born at Montrose, Minn., on April 26, 1884, and after attending Caton College entered railway service in 1907 as a chainman on the Northern Pacific, and was successively rodman and inspector on construction, transitman on location surveys, and resident engineer and assistant engineer on construction until 1912, when he was promoted to assistant engineer in charge of location. In 1914, he became an assistant engineer on the Great Northern at St. Paul,

James T. Derrig

Minn., returning to the Northern Pacific in 1916 as assistant engineer in charge of construction at Billings, Mont. In 1918, Mr. Derrig was placed in charge of coal surveys in the state of Montana and in the following year he was promoted to district engineer, with headquarters at St. Paul. In August, 1928, he was advanced to assistant to the chief engineer, with headquarters as before at St. Paul, and in December, 1943, he was promoted to acting assistant chief engineer, with headquarters at Seattle, the position he held at the time of his new appointment.

MECHANICAL

N. V. Moore has been appointed superintendent of the Hayne Car Shop, Southern, at Spartansburg, S. C.

A. A. Rudolph has been appointed shop superintendent of the National Railways Munitions, Ltd., and **John Bain** has been named chief engineer of the Montreal plant. Mr. Rudolph succeeds **L. H. Bexon,** whose appointment as superintendent of the Canadian National motive power shops at Transcona, Man., was announced in last weeks' *Railway Age.*

SPECIAL

Theodore Short, assistant attorney of the Missouri Pacific, with headquarters at St. Louis, Mo., has been promoted to assistant chief personnel officer, with the same headquarters.

Emmett B. Kurtz, special agent of the Missouri Pacific, with headquarters at Osawatomie, Kan., has been promoted to assistant chief special agent, with headquarters at Kansas City, Mo., succeeding **Robert M. Hope,** who has been transferred to Little Rock, Ark., replacing **Edward Monroe,** deceased.

OBITUARY

Edward Britton, assistant general freight agent of the Spokane, Portland & Seattle, with headquarters at Portland, Ore., died at his home in that city recently.

Table of Revenues and Expenses appears on next left-hand page

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1944

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Akron, Canton & Youngstown	Mar.	171	384,342	169	402,200	63,370	37,349	21,863	117,216	256,643	63.8	145,557	86,737	75,797	112,003
	3 mos.	171	1,104,662	363	1,149,305	173,653	108,114	58,692	337,004	728,618	63.4	420,687	265,487	222,617	244,691
Alton	Mar.	959	2,066,589	774,049	3,163,876	375,532	461,739	70,036	1,067,668	2,109,554	66.7	1,054,322	672,882	442,781	610,399
	3 mos.	959	6,017,151	2,176,320	9,121,130	953,239	1,269,393	207,038	3,110,331	5,922,080	64.9	3,199,050	2,035,698	1,356,555	1,724,754
Atchison, Topeka & Santa Fe System	Mar.	13,123	28,741,678	9,370,728	41,214,785	4,711,184	6,679,037	612,643	11,087,339	23,941,377	58.1	17,273,408	3,864,922	3,792,620	5,110,788
	3 mos.	13,123	82,885,381	27,449,787	118,976,977	12,821,624	19,388,470	1,807,618	32,763,282	68,818,700	57.8	50,158,277	12,281,759	12,117,269	14,998,035
Atlanta & West Point	Mar.	93	266,066	153,156	461,374	50,233	56,182	9,384	130,616	269,576	58.4	191,799	55,493	32,038	45,082
	3 mos.	93	783,154	446,978	1,359,097	149,260	162,069	28,385	437,542	835,865	61.5	523,232	167,911	92,839	124,477
Western of Alabama	Mar.	133	272,018	152,435	459,565	66,906	62,931	9,606	156,630	317,317	69.0	142,248	44,915	39,238	58,254
	3 Mos.	133	795,067	449,237	1,351,502	151,569	178,901	29,692	451,109	865,744	64.1	485,758	155,209	133,557	163,600
Atlanta, Birmingham & Coast	Mar.	639	577,835	44,747	662,312	117,149	99,858	27,948	254,095	522,656	78.91	139,656	63,374	24,737	90,199
	3 mos.	639	1,650,504	135,401	1,885,261	312,514	303,431	88,316	714,619	1,487,277	78.89	397,984	191,389	85,641	247,020
Atlantic Coast Line	Mar.	4,962	9,732,345	4,041,893	14,706,009	1,157,423	2,035,783	191,752	4,064,296	7,867,799	53.5	6,838,210	2,338,210	1,886,334	2,578,029
	3 mos.	4,962	27,139,886	11,715,229	41,526,100	3,345,647	5,720,550	588,413	11,516,354	22,380,181	53.9	19,145,919	6,145,919	4,673,847	5,979,620
Charleston & Western Carolina	Mar.	343	401,309	9,306	419,656	54,953	60,864	10,606	130,116	265,135	63.2	154,521	84,521	81,411	127,938
	3 mos.	343	1,120,354	31,260	1,180,054	156,522	177,540	31,444	367,176	753,368	63.8	426,686	226,686	220,631	284,705
Baltimore & Ohio	Mar.	6,143	26,912,594	4,062,495	32,605,479	4,419,823	6,780,751	539,285	10,739,835	23,655,914	72.6	8,949,565	4,810,724	4,101,481	6,418,815
	3 mos.	6,143	73,584,390	11,416,716	89,659,885	12,007,762	18,835,946	1,293,411	31,500,627	66,807,489	74.5	22,852,396	12,472,131	10,638,604	16,336,471
Staten Island Rapid Transit	Mar.	24	353,979	105,759	468,719	40,474	50,395	1,131	123,715	244,832	52.2	223,887	143,375	115,864	74,958
	3 mos.	24	890,108	308,604	1,221,821	107,859	109,801	3,630	358,427	658,779	53.9	563,042	361,944	296,891	222,262
Bangor & Aroostook	Mar.	602	1,001,317	71,104	1,114,520	143,047	128,330	6,991	265,158	576,986	51.8	537,534	183,660	186,578	359,589
	3 mos.	602	2,675,050	202,619	2,980,447	404,171	352,955	18,452	739,811	1,610,491	54.0	1,369,956	512,726	527,880	772,517
Bessemer & Lake Erie	Mar.	214	904,134	1,763	922,065	136,854	758,556	14,489	288,769	1,249,499	135.5	—327,434	—389,454	—117,808	20,683
	3 mos.	214	2,654,679	4,914	2,704,470	428,386	2,073,082	44,898	878,441	3,538,929	130.9	—834,459	—1,009,161	—212,762	—310,433
Boston & Maine	Mar.	1,819	5,344,247	1,542,463	7,528,912	1,181,483	1,375,975	67,311	2,829,316	5,685,937	75.5	1,842,975	1,074,114	774,348	1,393,147
	3 mos.	1,819	14,683,396	4,579,073	21,155,836	3,468,837	3,879,937	217,816	8,283,231	16,561,206	78.3	4,594,630	2,690,371	1,817,654	3,108,636
Burlington, Rock Island	Mar.	228	158,783	71,118	243,762	29,225	37,422	3,161	76,907	161,276	66.2	82,486	72,835	47,218	45,321
	3 mos.	228	428,944	195,389	664,248	75,746	73,415	9,248	204,288	405,807	61.1	258,441	231,720	158,003	138,793
Cambria & Indiana	Mar.	35	167,049	.....	167,104	8,689	44,933	511	27,383	87,902	52.60	79,202	—23,640	54,650	67,347
	3 mos.	35	503,409	.....	503,605	24,513	136,931	1,862	68,143	252,532	50.14	251,073	—70,702	165,150	135,222
Canadian Pacific Lines in Maine	Mar.	234	567,249	63,226	659,102	44,675	94,298	5,977	188,839	346,260	52.5	312,842	290,026	256,519	163,853
	3 mos.	234	1,513,255	210,759	1,808,778	127,009	260,197	19,110	541,191	985,068	54.5	823,710	756,331	641,652	417,487
Canadian Pacific Lines in Vermont	Mar.	90	78,361	17,601	107,514	24,904	36,895	2,178	98,582	167,885	156.2	—60,371	—69,463	—98,454	—81,632
	3 mos.	90	247,256	43,822	326,736	86,137	104,398	7,015	292,206	506,430	155.0	—179,694	—207,193	—300,753	—221,243
Central of Georgia	Mar.	1,815	2,328,658	667,117	3,300,296	431,427	610,498	69,572	1,182,705	2,434,897	73.8	865,399	414,660	315,596	965,631
	3 mos.	1,815	6,756,957	2,107,324	9,751,865	1,218,790	1,506,531	215,654	3,517,997	6,881,443	70.6	2,870,422	1,628,857	1,375,472	2,290,406
Central of New Jersey	Mar.	655	4,437,626	586,104	5,359,623	519,719	960,257	53,368	2,391,128	4,092,939	76.4	1,266,684	809,656	437,042	762,143
	3 mos.	655	12,403,728	1,743,012	15,112,591	1,539,688	2,888,116	147,068	6,813,688	11,868,761	78.5	3,243,830	1,878,813	868,712	1,513,439
Central Vermont	Mar.	422	647,862	61,000	761,692	117,486	114,132	9,565	361,985	631,657	82.9	130,035	82,200	35,140	78,067
	3 mos.	422	1,905,504	193,000	2,251,750	313,745	330,526	29,412	991,940	1,744,995	77.5	506,755	367,189	218,265	203,934
Chesapeake & Ohio	Mar.	3,073	15,901,079	2,235,743	18,757,558	2,089,514	3,441,049	271,618	4,898,627	11,367,996	60.6	7,389,562	2,380,308	2,819,542	3,317,266
	3 mos.	3,073	46,219,498	6,035,635	53,902,329	6,113,271	10,260,265	739,459	14,196,639	33,077,587	61.4	20,824,742	7,071,323	8,357,372	9,257,740
Chicago & Eastern Illinois	Mar.	912	2,078,472	566,111	2,914,353	301,634	456,157	43,333	1,076,453	1,982,076	68.0	932,277	616,277	354,928	417,589
	3 mos.	912	5,841,972	1,718,639	8,318,829	895,246	1,335,244	172,095	3,113,828	5,826,596	70.0	2,492,233	1,669,233	906,246	1,172,490
Chicago & Illinois Midland	Mar.	131	567,986	1,311	599,595	70,011	94,151	22,307	144,621	358,834	59.8	240,761	76,406	79,059	96,634
	3 mos.	131	1,549,573	3,939	1,639,408	211,844	264,637	66,417	427,608	1,048,761	64.0	590,647	220,983	231,094	261,718
Chicago & North Western	Mar.	8,101	9,436,992	2,906,859	13,675,668	1,750,260	2,449,700	213,879	4,732,429	9,666,233	70.7	4,009,435	1,848,107	1,940,710	2,733,958
	3 mos.	8,101	27,350,172	8,408,319	39,742,875	5,165,729	7,209,391	620,565	13,877,199	28,353,476	71.3	11,389,399	6,006,527	6,022,900	6,557,157
Chicago, Burlington & Quincy	Mar.	8,991	15,315,941	3,117,349	20,090,247	2,915,722	2,776,834	336,148	5,156,704	11,818,545	58.8	8,271,702	2,480,197	2,110,815	4,676,332
	3 mos.	8,991	44,035,862	9,753,212	58,594,404	7,372,716	7,860,649	854,726	15,154,849	32,968,279	56.3	25,626,125	8,158,128	7,097,723	11,995,746
Chicago Great Western	Mar.	1,500	2,199,030	294,383	2,684,396	364,763	329,422	63,439	996,005	1,834,102	68.3	850,294	466,430	278,089	304,056
	3 mos.	1,500	6,345,570	717,883	7,639,417	1,048,559	939,233	192,454	2,822,946	5,223,546	68.4	2,415,871	1,341,601	828,065	860,197
Chicago, Indianapolis & Louisville	Mar.	541	1,023,405	119,647	1,228,073	119,654	195,755	34,458	366,168	756,961	61.6	471,112	358,562	316,325	387,655
	3 mos.	541	2,865,104	301,453	3,420,029	328,109	565,323	97,816	1,074,570	2,185,387	63.9	1,234,642	914,054	770,955	843,621

Table continues on next left-hand page

FOR MAXIMUM MILEAGE

Modern power is high mileage power — out on the road day and night with little time allowed for servicing.

Naturally this intensive operation is a good barometer of the quality built into vital wearing parts.

The fact that the majority of modern locomotives are equipped with HUNT-SPILLER *Air Furnace* GUN IRON wear-resisting parts is highly significant.

The greater the mileage you demand from your locomotives the more you need the service built into H S G I wear-resisting parts—because your road needs the economies effected by this service.

HSGI
Reg. U. S. Trade Mark
Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings

Finished Parts
Dunbar Sectional Type Packing
Duplex Sectional Type Packing for Cylinders and Valves
(Duplex Springs for Above Sectional Packing)
Cylinder Snap Rings
Valve Rings, All Shapes
Light Weight Valves
Cylinder Liners and Pistons for Diesel Service

HUNT-SPILLER MFG. CORPORATION
V. W. Ellet, *President* — E. J. Fuller, *Vice-Pres. & Gen. Mgr.*

Office & Works
383 Dorchester Ave. — South Boston 27, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.
Export Agent for Latin America:
International Rwy. Supply Co., 30 Church Street, New York, N. Y.

HUNT-SPILLER *Air Furnace* GUN IRON

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Chicago, Milwaukee, St. Paul & Pacific	Mar.	10,739	14,702,577	2,648,785	18,948,320	2,849,458	3,015,399	250,104	6,374,194	13,185,579	69.6	5,762,741	2,621,741	2,381,440	5,754,503
	3 mos.	10,740	42,921,252	7,301,114	54,806,211	7,433,356	8,342,810	740,812	18,684,266	37,250,191	68.0	17,556,020	8,255,020	7,616,924	13,573,712
Chicago, Rock Island & Pacific	Mar.	7,751	10,992,337	3,739,337	15,904,593	1,801,294	2,315,616	326,252	4,523,503	9,631,148	60.6	6,273,445	3,305,020	2,801,242	4,695,365
	3 mos.	7,751	31,233,038	10,327,262	44,968,888	4,708,044	6,446,770	990,342	13,311,284	27,288,482	60.7	17,680,406	8,776,412	7,358,916	11,962,689
Chicago, St. Paul, Minneapolis & Omaha	Mar.	1,617	1,808,921	345,078	2,353,073	297,428	397,257	41,510	1,031,592	1,849,941	78.6	503,132	335,913	235,015	454,589
	3 mos.	1,617	5,295,666	1,007,135	6,878,690	855,948	1,015,203	122,609	2,984,661	5,218,246	75.9	1,660,444	1,076,503	847,990	998,807
Clinchfield	Mar.	302	1,221,228	10,286	1,239,524	86,038	216,706	22,806	254,999	602,052	48.6	637,472	508,825	514,994	598,695
	3 mos.	302	3,666,738	30,161	3,723,103	242,391	555,276	68,580	771,699	1,702,681	45.7	2,020,422	1,638,094	1,657,555	1,557,454
Colorado & Southern	Mar.	748	847,631	340,629	1,287,338	143,316	189,540	17,792	367,942	757,869	58.9	529,469	326,897	285,416	278,270
	3 mos.	748	2,599,507	930,622	3,836,634	376,764	628,674	50,840	1,165,511	2,356,048	61.4	1,480,586	920,621	791,517	768,449
Fort Worth & Denver City	Mar.	804	688,804	422,374	1,214,037	287,339	140,186	23,587	324,269	845,287	69.6	368,750	214,847	171,947	298,264
	3 mos.	804	2,135,575	1,290,393	3,737,189	668,630	408,192	70,326	963,735	2,290,808	61.3	1,446,381	838,852	717,723	765,466
Colorado & Wyoming	Mar.	42	93,809	.....	152,242	13,333	17,400	921	61,487	98,244	64.5	53,998	78,656	77,840	23,144
	3 mos.	42	280,007	.....	456,268	29,558	58,737	2,381	175,861	279,978	61.3	176,290	124,055	121,633	70,266
Columbus & Greenville	Mar.	168	105,641	13,375	128,105	31,212	17,379	4,174	41,644	106,919	83.5	21,186	7,127	8,749	15,061
	3 mos.	168	323,639	32,656	385,600	71,622	50,858	12,882	126,156	301,539	78.2	84,061	31,121	35,242	40,707
Delaware & Hudson	Mar.	846	4,281,600	160,051	4,540,119	471,421	1,110,918	47,784	1,551,106	3,295,583	72.6	1,244,536	721,524	697,911	853,457
	3 mos.	848	12,192,852	522,045	13,002,940	1,306,234	3,089,420	140,390	4,479,695	9,368,016	72.0	3,634,924	2,671,022	2,644,236	1,940,351
Delaware, Lackawanna & Western	Mar.	973	5,315,420	882,035	6,817,886	829,617	1,189,355	109,741	2,576,773	4,925,735	72.2	1,892,151	909,151	822,312	1,271,533
	3 mos.	973	15,053,142	2,532,509	19,364,160	2,068,611	3,268,383	340,429	8,240,496	14,508,526	74.9	4,855,634	2,289,634	1,993,717	2,920,915
Denver & Rio Grande Western	Mar.	2,399	4,901,228	865,458	6,010,397	671,242	1,308,039	98,338	1,782,366	4,067,192	67.7	1,943,205	1,177,492	1,092,438	1,514,635
	3 mos.	2,399	13,766,937	2,384,059	16,851,867	1,855,573	3,440,540	291,930	5,258,495	11,428,157	67.8	5,423,710	3,358,394	3,085,816	3,944,662
Denver & Salt Lake	Mar.	232	252,927	8,759	271,252	52,130	51,553	2,473	94,822	213,236	78.6	58,016	27,718	78,048	94,456
	3 mos.	232	774,757	25,849	830,406	158,280	164,381	7,762	286,077	651,641	78.5	178,765	89,987	240,035	312,908
Detroit & Mackinac	Mar.	230	68,218	7,987	84,787	13,534	18,637	835	33,540	70,358	83.0	14,429	9,992	6,486	3,292
	3 mos.	230	174,818	24,642	224,055	40,214	52,889	2,545	95,144	202,250	90.3	21,805	9,070	2,576	13,193
Detroit & Toledo Shore Line	Mar.	50	447,931	.....	449,375	34,857	26,688	9,682	113,833	193,728	43.1	255,647	131,900	66,723	123,756
	3 mos.	50	1,319,749	.....	1,323,542	98,905	79,550	28,240	335,724	568,275	42.9	755,267	387,634	200,202	293,015
Detroit, Toledo & Ironton	Mar.	464	773,476	1,170	822,985	95,216	125,047	13,745	207,523	467,885	56.9	355,100	201,226	190,060	271,897
	3 mos.	464	2,480,837	3,351	2,632,413	252,977	362,826	43,534	641,444	1,378,962	52.4	1,253,451	729,649	684,328	786,344
Duluth, Missabe & Iron Range	Mar.	544	275,219	6,311	325,971	399,735	582,330	4,135	327,338	1,353,409	415.2	—1,027,438	—1,141,363	—1,111,423	—906,629
	3 mos.	545	561,575	15,413	694,256	1,057,491	1,677,819	13,612	844,902	3,705,530	533.7	—3,011,274	—3,259,484	—2,141,964	—2,677,690
Duluth, Winnipeg & Pacific	Mar.	175	317,000	3,300	324,300	45,001	32,228	1,916	135,567	218,542	67.4	105,758	82,118	26,134	—4,233
	3 mos.	175	890,000	9,200	912,800	119,101	99,518	5,931	386,457	623,078	68.3	289,722	223,958	94,254	41,245
Elgin, Joliet & Eastern	Mar.	392	2,615,126	12	2,978,468	257,458	738,945	18,288	1,075,553	2,161,941	72.6	816,527	356,496	287,675	153,187
	3 mos.	392	7,508,245	34	8,580,649	738,247	2,264,967	50,377	3,129,969	6,383,558	74.4	2,197,091	1,075,702	843,468	361,295
Erie	Mar.	2,244	12,452,392	1,201,063	14,483,181	1,144,632	2,402,741	218,726	5,096,865	9,309,187	64.3	5,173,994	2,384,013	1,698,140	1,686,765
	3 mos.	2,244	35,206,740	3,125,558	40,657,601	3,300,343	6,885,437	677,660	15,171,489	27,329,983	67.2	13,327,618	6,325,916	4,367,852	4,769,191
Florida East Coast	Mar.	682	2,025,905	1,045,674	3,284,074	383,026	288,375	53,708	896,189	1,739,042	53.0	1,545,032	577,606	455,521	1,015,351
	3 mos.	682	5,333,127	3,586,933	9,593,032	1,000,842	856,318	147,877	2,456,384	4,827,349	50.3	4,765,683	2,884,221	2,513,328	2,739,241
Georgia Railroad	Mar.	329	712,614	196,267	958,884	109,668	122,543	20,051	312,672	586,192	61.1	372,692	328,340	332,414	362,820
	3 mos.	329	1,923,798	480,490	2,540,498	286,264	341,231	64,254	917,344	1,674,408	65.9	866,090	758,897	766,016	1,059,032
Georgia & Florida	Mar.	408	195,800	6,144	207,689	51,943	25,534	10,349	68,719	163,806	78.9	43,883	33,226	17,391	18,110
	3 mos.	408	568,876	18,790	603,772	147,102	71,912	32,023	194,487	467,489	77.4	136,283	104,884	69,631	48,273
Grand Trunk Western	Mar.	1,026	2,527,000	360,000	3,105,000	467,894	505,064	34,185	1,182,176	2,292,191	73.8	812,809	548,294	501,402	589,161
	3 mos.	1,026	7,477,000	956,000	8,993,000	1,370,371	1,477,935	105,483	3,439,583	6,714,878	74.7	2,278,122	1,545,272	1,450,294	1,923,066
Canadian National Lines in New England	Mar.	172	111,100	7,600	145,000	38,606	30,050	2,255	87,372	178,757	123.3	—33,757	—55,202	—95,039	85,629
	3 mos.	172	363,200	22,700	475,800	125,020	101,254	6,865	292,767	580,022	121.9	—104,222	—168,557	—279,664	—240,547
Great Northern	Mar.	8,372	13,682,484	1,687,203	16,351,037	2,538,043	2,755,785	162,687	5,111,674	11,023,611	67.4	5,327,426	2,089,068	1,861,788	2,040,423
	3 mos.	8,373	36,866,637	4,587,566	44,366,090	7,001,990	8,463,210	608,907	13,778,973	31,215,143	70.4	13,150,947	5,078,937	4,861,694	5,125,900
Green Bay & Western	Mar.	234	235,836	554	244,171	57,406	24,571	7,929	67,614	166,381	68.1	77,790	42,195	37,083	72,258
	3 mos.	234	711,110	1,493	735,186	161,406	77,902	24,844	197,587	490,329	66.7	244,857	140,742	125,563	164,418
Gulf & Ship Island	Mar.	259	227,352	50,876	300,835	39,017	19,138	1,883	89,062	158,602	52.7	142,233	123,406	109,571	4,811
	3 mos.	259	596,802	132,821	793,340	121,127	62,876	7,061	276,904	497,881	62.8	295,459	237,794	197,487	9,066

Gulf & Ship Island	Mar.	259	227,352	50,876	300,835	39,017	19,138	1,883	89,062	158,602	52.7	142,233	123,406	109,571	4,811
	3 mos.	259	596,802	132,821	793,340	121,127	62,876	7,061	276,904	497,881	62.8	295,459	237,794	197,487	9,066

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Operating revenues: Passenger	Operating revenues: Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Operating expenses: Maintenance of Equipment	Operating expenses: Traffic	Operating expenses: Transportation	Operating expenses: Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Gulf, Mobile & Ohio	Mar.	1,973	2,979,194	208,015	3,274,113	575,302	525,560	65,218	843,532	2,108,413	64.4	1,165,700	585,222	433,429	464,631
	3 mos.	1,973	8,193,744	609,834	9,098,840	1,491,557	1,557,998	238,257	2,505,111	6,133,952	67.4	2,964,888	1,529,818	1,115,557	1,362,271
Illinois Central	Mar.	4,823	14,816,672	3,140,707	19,135,988	2,341,184	3,464,814	176,778	5,449,565	12,075,198	63.1	7,060,790	2,800,136	2,501,029	3,100,272
	3 mos.	4,823	42,106,575	8,512,361	53,916,820	6,813,174	9,753,455	598,155	16,037,095	35,072,301	65.0	18,844,519	7,481,519	6,589,427	9,090,974
Yazoo & Mississippi Valley	Mar.	1,524	2,390,269	448,401	3,001,896	442,342	343,189	27,361	987,535	1,893,688	63.1	1,108,208	453,559	348,327	722,759
	3 mos.	1,524	7,457,406	1,215,391	9,171,087	1,221,303	1,012,391	96,363	2,895,825	5,503,505	60.0	3,667,582	1,618,801	1,320,580	1,849,072
Illinois Central System	Mar.	6,347	17,206,941	3,589,108	22,137,884	2,783,526	3,808,003	204,139	6,437,100	13,968,886	63.1	8,168,998	3,248,863	2,854,269	3,822,944
	3 mos.	6,347	49,563,981	9,727,752	63,087,907	8,034,477	10,765,846	694,518	18,932,920	40,575,806	64.3	22,512,101	9,086,792	7,921,746	10,948,785
Illinois Terminal	Mar.	476	786,695	190,582	1,056,609	88,824	79,930	19,852	311,731	531,244	50.28	525,365	155,596	120,157	113,708
	3 mos.	476	2,103,892	513,151	2,846,343	263,639	260,852	59,674	873,203	1,540,159	54.11	1,306,184	442,693	358,549	344,475
Kansas City Southern	Mar.	878	3,193,268	435,970	3,852,306	471,157	539,003	66,464	1,023,447	2,242,111	58.2	1,610,195	692,195	462,075	628,683
	3 mos.	878	8,709,197	1,267,905	10,586,484	1,527,296	1,465,267	185,555	3,035,367	6,593,799	62.3	3,992,685	1,883,685	1,224,446	1,719,445
Kansas, Oklahoma & Gulf	Mar.	328	350,939	1,677	355,767	39,667	19,371	10,852	81,210	162,104	45.6	193,663	107,238	82,610	102,926
	3 mos.	328	1,028,446	4,507	1,042,664	99,307	67,131	26,946	241,202	466,551	44.7	576,113	317,110	245,185	317,267
Lake Superior & Ishpeming	Mar.	156	44,505	130	53,121	27,667	43,898	522	35,179	115,958	218.3	—62,837	—88,309	—79,687	—105,616
	3 mos.	156	117,429	316	132,188	71,566	135,747	1,753	94,063	327,903	248.1	—195,715	—274,715	—249,349	—272,556
Lehigh & Hudson River	Mar.	96	308,124	1,253	310,646	42,207	33,609	5,027	91,374	178,442	57.4	132,204	49,296	27,850	41,602
	3 mos.	96	887,120	1,653	892,082	121,475	100,358	15,555	269,538	528,979	59.3	363,103	145,135	86,621	91,937
Lehigh & New England	Mar.	190	522,253	......	525,181	46,198	123,557	8,365	169,981	369,100	70.3	156,081	81,246	96,630	130,593
	3 mos.	190	1,561,953	......	1,570,464	139,926	355,335	22,918	468,637	1,048,003	66.7	522,461	283,130	311,846	314,993
Lehigh Valley	Mar.	1,260	7,464,306	803,917	8,714,203	1,161,130	1,288,404	115,051	3,199,924	5,998,672	68.8	2,715,531	1,356,379	892,452	1,302,389
	3 mos.	1,260	20,660,830	2,115,114	24,061,195	3,113,332	3,886,991	364,312	9,388,415	17,398,093	72.3	6,663,102	3,682,646	2,415,420	3,290,613
Louisiana & Arkansas	Mar.	834	1,335,061	146,462	1,539,778	348,059	180,676	43,086	350,218	988,847	64.2	550,931	211,038	142,873	181,128
	3 mos.	834	4,291,001	458,725	4,930,421	1,059,092	530,243	111,364	1,073,665	2,967,613	60.2	1,962,808	725,772	527,277	602,823
Louisville & Nashville	Mar.	4,745	13,281,588	3,718,763	18,089,941	2,630,858	3,551,002	161,648	4,234,640	11,267,914	62.3	6,822,027	1,742,997	2,079,448	2,362,379
	3 mos.	4,745	39,015,189	10,962,860	53,131,189	5,972,606	9,169,653	586,498	14,870,022	32,422,021	61.0	20,709,168	5,412,991	6,319,776	6,421,462
Maine Central	Mar.	988	1,427,155	314,709	1,848,363	289,760	308,732	17,513	661,256	1,343,829	72.7	504,534	294,214	224,506	398,342
	3 mos.	988	3,881,067	865,084	5,058,558	946,448	874,076	41,868	1,913,243	3,931,311	77.7	1,127,247	694,353	522,991	845,498
Midland Valley	Mar.	334	124,808	316	126,363	24,013	12,888	2,603	46,001	91,045	72.1	35,318	29,071	14,954	27,057
	3 mos.	334	414,344	649	420,588	57,893	33,248	7,021	139,206	252,083	59.9	168,505	104,684	68,658	142,077
Minneapolis & St. Louis	Mar.	1,408	1,113,226	44,236	1,205,500	194,447	175,048	61,771	400,627	889,924	73.8	315,576	203,379	183,929	387,164
	3 mos.	1,408	3,449,647	109,646	3,698,223	601,581	535,033	204,932	1,181,535	2,692,689	72.8	1,005,534	454,530	440,973	1,006,897
Minneapolis, St. Paul & Sault Ste. Marie	Mar.	4,277	4,082,490	233,716	4,562,427	652,071	690,711	68,834	1,652,967	3,185,178	69.8	1,377,249	1,119,979	1,042,546	517,912
	3 mos.	4,277	10,972,266	656,967	12,362,320	1,696,254	2,083,840	213,478	4,787,429	9,151,613	74.0	3,210,707	2,339,406	2,127,088	1,153,424
Duluth, South Shore & Atlantic	Mar.	551	326,974	30,371	377,388	59,359	46,955	10,267	144,378	270,440	71.7	106,948	86,614	77,003	77,527
	3 mos.	551	957,989	89,765	1,105,859	179,298	156,037	27,053	421,179	808,484	73.1	297,375	236,349	209,873	104,439
Spokane International	Mar.	152	139,765	10,079	157,456	49,639	15,000	3,449	46,814	122,050	77.5	35,406	22,876	9,977	25,963
	3 mos.	152	436,238	27,089	487,096	152,162	42,620	10,335	143,090	369,406	75.8	117,690	77,559	39,328	99,643
Mississippi Central	Mar.	158	216,833	5,750	214,890	30,378	17,985	8,668	57,572	121,918	56.7	92,972	58,028	42,377	26,549
	3 mos.	158	537,144	14,193	558,614	88,202	50,589	27,587	157,533	347,578	62.2	211,036	132,902	94,805	89,507
Missouri & Arkansas	Mar.	365	208,512	5,331	223,317	49,180	24,243	7,976	70,688	158,805	71.1	64,512	42,503	24,417	19,126
	3 mos.	365	572,652	11,055	614,350	133,610	64,296	22,949	201,622	442,475	72.0	171,875	112,393	57,355	46,619
Missouri-Illinois	Mar.	172	253,972	783	256,512	40,780	41,893	5,444	65,649	156,861	61.2	99,651	41,923	35,603	36,910
	3 mos.	172	761,242	3,642	769,028	126,790	110,425	11,996	186,081	452,640	58.9	316,388	124,994	108,590	97,695
Missouri-Kansas-Texas Lines	Mar.	3,272	4,897,816	1,107,808	6,535,311	1,134,708	850,907	132,315	2,061,495	4,446,959	68.0	2,088,352	1,431,346	1,054,785	794,379
	3 mos.	3,286	13,971,498	3,194,922	18,657,936	3,401,951	2,419,241	398,179	5,825,511	12,764,206	68.4	5,893,730	3,536,869	2,470,722	2,674,881
Missouri Pacific	Mar.	7,097	14,858,497	3,561,929	19,825,621	2,220,834	2,762,342	316,375	5,902,098	11,789,815	59.5	8,035,806	3,665,504	2,787,608	3,673,908
	3 mos.	7,097	43,141,988	10,367,450	57,493,614	6,038,518	7,736,073	877,451	16,542,343	32,820,180	57.1	24,673,434	11,177,096	8,699,272	11,883,670
Gulf Coast Lines	Mar.	1,734	4,274,031	351,320	4,747,384	642,748	413,304	55,895	1,020,420	2,220,437	46.77	2,526,947	1,073,935	706,310	567,194
	3 mos.	1,734	11,822,632	1,040,819	13,281,759	1,650,606	1,087,988	159,798	2,936,437	6,107,016	45.98	7,174,743	3,078,504	2,045,190	1,675,712
International Great Northern	Mar.	1,110	2,027,873	544,107	2,799,823	468,555	349,528	34,972	839,503	1,794,949	64.1	1,004,874	513,606	342,234	405,438
	3 mos.	1,110	5,380,208	1,464,805	7,541,125	1,230,999	991,129	105,490	2,359,204	4,988,631	66.2	2,552,494	1,376,634	929,212	1,225,663
Monongahela	Mar.	170	592,169	1,893	599,494	79,419	46,380	768	144,776	278,176	46.4	321,318	216,577	129,655	169,789
	3 mos.	170	1,692,066	5,215	1,708,071	206,435	136,916	2,526	442,820	802,751	47.0	905,320	587,048	333,263	453,187

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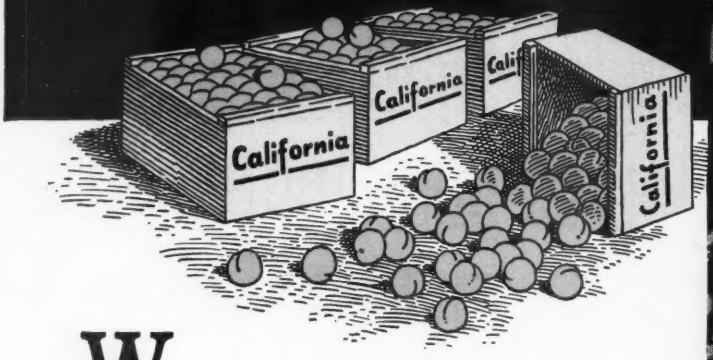
How the WESTERN PACIFIC

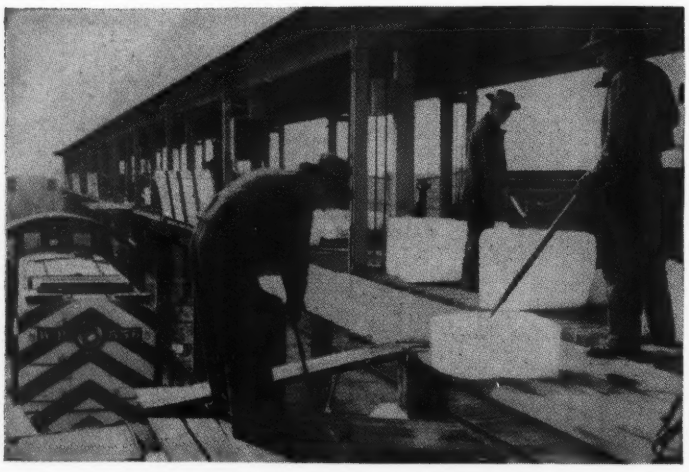
Dispatches Perishables Worth Millions with Alco-G.E. Diesel-electrics



WHEN the perishable fruit and vegetable crops of the Sacramento and San Joaquin valleys of California start rolling from the fields to eastern markets and army mess tables, every step in their movement must be swift, co-ordinated, and precise—otherwise much of this rich harvest is lost.

For its prompt dispatch to Chicago, New York, and other great marketing centers, the Western Pacific depends on the virtually continuous availability of the four of its 16 Alco-G.E. diesel-electrics that are assigned to the Stockton Terminal, large mid-California freight center.

1 **96.5% OF THE TIME** these diesel-electrics are ready to break up the local freight trains that are constantly arriving at the yard, rush refrigerator cars to the icing docks, and then promptly classify them and make up the special trains that carry California's produce eastward on fast schedules.



2 **22.5 HOURS A DAY** are spent in the closely synchronized switching and icing movements. If these movements are interrupted, the produce continues ripening to the point of spoilage. By using Alco-G.E. diesel-electrics the Western Pacific avoids such costly delays. Refueling is necessary but once every three days, and it takes only 15 minutes per locomotive. They work 29 days a month, and one day a month they are tested and serviced.

3 **THOUSANDS OF CARS A MONTH** are made up into fruit and vegetable blocks—solid trains, each destined for its own particular mid-western or eastern market. During the make-up of these trains, when thousands of short-distance moves must be made, the fast pickup of the diesel-electrics, with light or heavy loads, is proving to be indispensable in shortening the time of each movement.

One of the Western Pacific's eight 1000-hp Alco-G.E. diesel-electrics. In addition, the W.P. operates eight 660-hp units.

"These diesel-electrics are the real McCoy," says P.D. Barry, Western Pacific's Terminal Superintendent at Stockton. **"It's a regular thing to keep them switching 24 hours a day—they take so little servicing."**

4 **30% LESS TIME** is required for each switching operation. The low, narrow hoods of the diesel-electrics give their enginemen a clear, unobstructed view forward so as to see all signals and switches quickly. When reversing, there is no tender to block their view. This high visibility helps the Western Pacific to utilize the diesel-electric's smooth, powerful response without fear of damaging the valuable cargo or the cars that carry it.

AT ALL THE STRATEGIC OPERATING POINTS of the Western Pacific—the San Francisco and Oakland terminals; the Stockton yard with its concentration of industrial, military, and perishable freight; at Oroville; and Elko, Nevada—Alco-G.E. diesel-electrics are meeting the wartime need for more locomotive-hours by delivering 30 per cent more work-hours per unit than was previously possible. And they are meeting demands for greater switching speeds, because their performance characteristics so perfectly match the requirements of the work they are doing.

Matching motive power to the job is an Alco-G.E. specialty. We build all three types—diesel-electric, electric, and steam—and can, therefore, supply the one that is economically best suited to your needs.

Alco DIESEL-ELECTRIC

GE

AMERICAN LOCOMOTIVE and GENERAL ELECTRIC

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	Net railway operating income 1943
Montour	Mar.	51	251,760	.....	253,185	14,955	67,605	1,130	75,924	167,378	66.1	85,807	27,750	60,879	63,147
	3 mos.	51	694,502	.....	698,986	45,580	194,801	2,965	221,561	488,862	69.9	210,124	51,503	160,802	185,114
Nashville, Chattanooga & St. Louis	Mar.	1,072	2,753,145	698,337	3,734,997	544,719	743,412	86,216	1,126,884	2,622,170	70.2	1,112,827	582,415	533,123	797,177
	3 mos.	1,072	7,796,944	2,091,949	10,741,762	1,612,975	2,170,775	263,777	3,403,128	7,772,478	72.4	2,969,284	1,620,591	1,499,422	2,074,003
New York Central	Mar.	10,746	41,909,287	15,611,726	62,795,782	8,521,026	10,862,220	704,538	22,338,488	44,698,198	71.2	18,097,584	7,382,183	5,627,409	7,727,073
	3 mos.	10,746	118,324,796	42,469,759	176,760,742	24,197,728	32,423,514	2,048,551	65,689,251	131,257,336	74.3	45,503,406	20,772,873	15,437,654	23,194,154
Pittsburgh & Lake Erie	Mar.	229	2,811,691	107,104	3,024,221	273,331	854,467	43,349	1,012,744	2,297,134	76.0	727,087	—81,209	441,910	619,998
	3 mos.	229	8,013,985	301,686	8,593,859	900,169	2,705,326	130,542	2,851,160	6,915,338	80.5	1,678,521	—393,907	1,271,070	1,660,551
New York, Chicago & St. Louis	Mar.	1,688	8,527,803	497,134	9,180,897	964,839	1,162,692	112,291	2,781,079	5,209,581	56.7	3,971,316	1,581,376	997,381	1,288,902
	3 mos.	1,688	23,871,250	1,317,797	25,653,531	2,515,320	3,538,115	395,803	8,087,437	15,137,258	59.0	10,516,273	4,397,072	2,825,714	3,444,833
New York, New Haven & Hartford	Mar.	1,838	8,817,698	5,715,932	15,739,940	2,006,157	2,352,595	167,378	5,612,326	10,876,041	69.1	4,863,899	3,251,351	2,160,599	2,891,543
	3 mos.	1,838	24,138,840	16,658,832	44,255,352	5,421,554	6,719,422	489,393	16,174,440	30,941,197	69.9	13,314,155	8,739,963	5,559,290	7,328,739
New York Connecting	Mar.	21	208,309	.....	235,853	59,607	11,821	.....	58,624	131,620	55.8	104,233	—15,907	121,468	158,771
	3 mos.	21	599,299	.....	676,808	162,931	41,190	.....	164,248	373,161	55.1	303,647	84,541	443,075	373,170
New York, Ontario & Western	Mar.	546	719,663	14,737	802,124	83,815	151,186	21,705	454,484	739,100	92.1	63,024	20,981	—34,308	5,420
	3 mos.	546	1,974,074	54,977	2,229,774	241,063	428,877	65,923	1,273,071	2,088,846	93.7	140,928	22,819	—94,503	—94,021
New York, Susquehanna & Western	Mar.	120	553,715	36,778	588,447	31,559	51,520	3,747	189,814	292,123	49.6	296,324	183,218	82,029	126,414
	3 mos.	120	1,497,795	102,569	1,650,561	97,708	145,040	13,384	566,468	871,518	52.8	779,043	506,625	268,317	287,124
Norfolk & Western	Mar.	2,154	11,296,947	1,583,893	13,274,277	1,759,822	2,755,202	113,181	2,427,369	7,322,201	55.2	5,952,076	1,614,042	2,320,502	1,974,954
	3 mos.	2,154	33,359,006	4,171,706	38,847,966	4,489,896	8,080,501	449,238	8,602,531	22,737,738	58.5	16,110,228	4,058,584	6,238,125	5,665,022
Norfolk Southern	Mar.	728	651,044	27,649	701,225	203,301	71,229	16,220	241,046	546,089	77.9	155,136	93,813	64,150	102,885
	3 mos.	728	1,806,250	85,170	1,958,687	508,644	234,475	77,117	703,051	1,595,007	81.4	363,680	217,214	141,656	254,514
Northern Pacific	Mar.	6,867	10,260,843	1,878,861	13,163,269	1,650,890	2,535,058	169,752	3,865,102	8,872,744	67.4	4,290,525	1,585,526	1,802,429	2,495,845
	3 mos.	6,867	28,507,925	5,017,014	36,526,829	4,712,886	7,296,323	520,993	11,160,329	25,431,182	69.6	11,095,647	4,023,088	5,078,126	6,613,183
Northwestern Pacific	Mar.	331	459,121	18,684	499,754	193,048	64,968	2,616	170,374	437,684	87.6	62,070	25,341	2,027	40,671
	3 mos.	331	1,315,307	46,796	1,423,783	544,160	192,241	8,092	469,697	1,234,309	86.7	189,474	100,071	35,873	152,698
Oklahoma City-Ada-Atoka	Mar.	132	122,909	573	125,882	21,290	5,753	1,581	31,363	64,824	51.5	61,058	35,439	18,866	18,675
	3 mos.	132	383,181	1,634	389,471	56,491	14,301	3,972	92,081	180,959	46.5	208,512	119,214	74,403	69,617
Pennsylvania	Mar.	10,099	58,425,175	20,705,286	85,047,568	9,376,276	16,524,180	1,079,397	33,830,556	63,552,897	74.7	21,494,671	9,183,952	8,022,034	8,655,878
	3 mos.	10,104	165,922,989	61,597,953	244,516,270	27,209,571	46,843,989	3,162,784	99,467,612	185,212,095	75.7	59,304,175	25,828,100	22,910,767	22,864,783
Long Island	Mar.	376	1,395,828	1,881,303	3,451,587	590,636	575,592	25,558	1,706,298	2,952,589	85.5	498,998	124,346	—121,070	92,241
	3 mos.	376	3,591,345	5,634,084	9,725,118	1,696,567	1,622,739	72,461	4,877,076	8,443,667	86.8	1,281,451	402,371	—291,473	—108,573
Pennsylvania-Reading Seashore Lines	Mar.	392	520,383	226,208	775,622	168,741	101,224	5,704	451,589	751,850	96.9	23,772	—77,641	—177,075	—103,360
	3 mos.	392	1,422,431	637,334	2,160,696	468,678	310,020	21,717	1,310,921	2,180,960	100.9	—20,264	—284,760	—575,800	—310,184
Pere Marquette	Mar.	1,979	4,467,596	303,422	4,974,546	738,505	864,967	74,034	1,737,430	3,608,487	72.5	1,366,059	547,096	436,292	659,892
	3 mos.	1,979	12,405,915	886,123	13,873,354	2,174,845	2,435,856	213,939	5,003,479	10,381,391	74.8	3,491,963	1,321,742	1,174,520	1,827,973
Pittsburg & Shawmut	Mar.	97	125,804	.....	126,633	24,397	25,376	2,161	35,904	96,191	76.0	30,442	17,797	16,228	27,872
	3 mos.	97	399,265	.....	401,440	65,737	71,572	5,391	112,154	273,948	68.2	127,492	103,586	97,109	64,583
Pittsburgh & West Virginia	Mar.	136	584,225	.....	602,160	84,777	106,118	23,014	144,921	382,958	63.6	219,202	131,339	156,236	147,660
	3 mos.	136	1,699,268	26	1,755,362	246,106	348,245	64,307	435,159	1,171,250	66.7	584,062	353,877	441,544	416,632
Pittsburg, Shawmut & Northern	Mar.	190	114,782	.....	115,801	22,067	23,071	1,118	47,295	99,669	86.1	16,132	9,338	3,952	19,049
	3 mos.	190	342,911	.....	347,149	65,671	72,004	3,243	146,965	306,152	88.2	40,997	20,725	2,662	42,213
Reading	Mar.	1,412	8,985,340	856,753	10,367,858	1,102,718	1,899,861	87,536	3,596,852	6,883,447	66.4	3,484,411	1,821,828	1,642,615	2,242,576
	3 mos.	1,415	25,568,066	2,467,461	29,406,289	3,075,019	5,561,167	246,979	10,651,808	20,135,336	68.5	9,270,953	4,580,804	3,837,076	5,121,816
Richmond, Fredericksburg & Potomac	Mar.	118	1,647,330	1,369,786	3,321,603	170,506	372,019	13,792	820,535	1,486,354	44.7	1,835,249	485,408	283,049	472,451
	3 mos.	118	4,717,804	4,078,417	9,640,918	510,158	971,182	41,653	2,417,431	4,274,102	44.3	5,366,816	1,424,080	868,103	1,101,632
Rutland	Mar.	407	299,798	49,995	411,947	53,732	87,681	12,903	215,071	385,678	93.6	26,269	634	2,679	46,960
	3 mos.	407	805,111	162,076	1,144,502	171,170	263,539	35,427	623,799	1,140,382	99.6	4,120	—71,843	—68,570	38,991
St. Louis-San Francisco	Mar.	4,659	6,734,086	2,004,704	9,418,559	1,283,159	1,802,303	175,316	3,105,103	6,725,021	71.4	2,693,538	1,168,598	1,194,499	2,135,265
	3 mos.	4,659	19,533,539	5,731,865	27,251,661	3,464,238	5,202,487	503,787	9,174,843	19,374,524	71.1	7,877,137	3,990,250	4,011,055	5,562,888
St. Louis, San Francisco & Texas	Mar.	159	378,731	54,073	441,168	34,336	29,190	13,809	101,595	186,838	42.4	254,330	70,875	45,618	73,752
	3 mos.	159	936,515	98,434	1,058,278	101,653	88,673	33,882	295,609	541,937	51.2	516,341	208,948	131,295	238,055

REVENUES AND EXPENSES OF RAILWAYS

Name of road		Av. mileage operated during period	Freight	Passenger	Total (inc. misc.)	Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1944	1943
St. Louis-San Francisco	3 mos.	4,659	19,533,539	5,731,865	27,251,661	3,464,238	5,202,487	503,787	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Louis, San Francisco & Texas	Mar.	159	378,731	54,073	441,168	34,336	29,190	13,809	101,595	186,838	42.4	254,330	70,875	45,618	73,752
	3 mos.	159	936,515	98,434	1,058,278	101,653	88,673	33,882	295,609	541,937	51.2	516,341	208,948	131,295	238,055

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1944—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Operating revenues: Passenger	Operating revenues: Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Operating expenses: Maintenance of: Equipment	Operating expenses: Traffic	Operating expenses: Transportation	Operating expenses: Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1944	Net railway operating income: 1943
St. Louis Southwestern Lines	Mar.	1,607	5,435,330	349,107	5,916,812	785,546	467,836	72,100	1,289,270	2,735,348	46.2	3,181,464	1,119,701	870,976	692,863
	3 mos.	1,607	14,781,716	885,972	16,062,686	1,871,018	1,518,568	273,992	3,950,711	7,990,261	49.7	8,072,425	3,083,700	2,255,527	2,079,870
Seaboard Air Line	Mar.	4,175	8,403,890	3,622,888	12,875,701	1,448,378	1,684,459	242,603	3,748,151	7,630,529	59.3	5,245,172	2,745,172	2,123,000	4,149,268
	3 mos.	4,177	23,741,315	10,985,949	37,095,047	4,167,103	4,958,405	708,851	10,726,505	22,029,194	59.4	15,065,853	7,665,853	5,972,404	11,221,608
Southern Railway	Mar.	6,513	15,927,466	4,693,958	21,888,471	3,044,837	2,712,356	56,599	6,801,948	12,989,616	59.3	8,898,855	3,221,691	2,875,207	2,677,885
	3 mos.	6,513	45,953,444	14,311,835	64,017,822	7,905,440	9,058,759	502,906	18,593,523	37,749,958	59.0	26,267,864	9,375,977	8,363,309	8,358,762
Alabama Great Southern	Mar.	315	1,379,423	346,669	1,819,096	190,912	209,131	1,896	642,388	1,118,666	61.5	700,430	191,339	140,990	277,788
	3 mos.	315	3,936,598	1,254,017	5,478,340	510,801	766,446	55,022	1,663,937	3,177,981	58.0	2,300,359	665,347	516,781	673,373
Cincinnati, New Orleans & Texas Pacific	Mar.	337	2,641,155	595,576	3,393,923	354,366	463,552	6,154	850,429	1,749,016	51.5	1,644,907	457,747	489,695	649,092
	3 mos.	337	6,949,148	1,962,178	9,374,108	944,513	1,769,685	87,175	2,416,544	5,465,868	58.3	3,908,240	1,124,806	1,290,309	1,555,449
Georgia Southern & Florida	Mar.	397	330,018	201,781	591,730	94,331	84,419	2,929	184,848	375,213	63.4	216,517	97,096	60,309	77,862
	3 mos.	397	922,439	587,203	1,682,850	235,621	214,126	8,068	534,803	1,036,554	61.6	636,296	275,044	169,166	256,171
New Orleans & North Eastern	Mar.	204	887,555	190,174	1,125,399	179,179	66,771	13	360,994	638,545	56.7	486,854	178,849	102,569	92,779
	3 mos.	204	2,442,528	574,830	3,160,081	417,602	306,726	28,307	987,457	1,843,916	58.4	1,316,165	519,851	259,149	331,434
Southern Pacific	Mar.	8,263	28,660,326	9,570,495	41,453,106	5,652,591	7,531,619	655,370	12,745,180	28,787,374	69.4	12,665,732	5,312,173	3,652,449	6,897,235
	3 mos.	8,263	83,282,915	26,843,166	119,731,958	16,781,462	21,968,761	1,759,694	37,114,093	83,927,873	70.1	35,804,085	14,160,526	9,951,778	18,032,868
Texas & New Orleans	Mar.	4,341	8,237,495	2,356,056	11,202,583	1,605,896	1,407,352	175,739	2,879,322	6,441,933	57.5	4,760,650	1,953,740	1,411,614	2,640,458
	3 mos.	4,341	24,963,892	6,927,422	33,693,464	4,253,596	3,822,625	449,592	8,412,795	18,086,080	53.7	15,607,384	5,978,675	4,390,488	7,374,037
Spokane, Portland & Seattle	Mar.	943	1,513,015	228,505	1,834,122	573,094	214,653	14,918	615,102	1,484,217	80.9	349,905	261,193	115,238	765,436
	3 mos.	943	4,372,755	586,318	5,253,021	1,460,446	1,349,667	40,440	1,901,081	4,157,612	79.1	1,095,409	650,781	141,943	1,940,440
Tennessee Central	Mar.	286	363,556	70,489	457,034	93,793	69,878	7,366	139,930	330,344	72.3	126,690	73,590	52,683	76,543
	3 mos.	286	1,094,278	194,400	1,355,698	272,588	190,125	22,074	418,791	960,122	70.8	395,576	218,502	158,318	173,845
Texas & Pacific	Mar.	1,884	4,358,365	1,784,001	6,714,751	921,812	974,513	111,204	1,530,621	3,870,102	57.6	2,844,649	734,306	557,838	826,479
	3 mos.	1,884	12,855,740	5,137,507	19,735,686	2,625,093	2,980,680	321,511	4,571,182	11,357,367	57.5	8,378,319	2,178,825	1,670,680	2,271,936
Texas Mexican	Mar.	162	188,947	783	215,553	28,453	14,784	3,979	46,814	104,398	48.4	111,155	81,490	77,338	83,719
	3 mos.	162	465,327	3,237	543,468	73,260	47,881	12,539	130,590	293,434	54.0	250,034	182,489	169,419	225,984
Toledo, Peoria & Western	Mar.	239	464,349	232	467,618	46,875	21,186	21,856	92,788	191,358	40.9	276,260	223,938	199,158	206,237
	3 mos.	239	1,359,810	257	1,367,943	117,955	64,191	69,124	278,244	566,048	41.4	801,895	704,903	638,305	546,077
Union Pacific System	Mar.	9,782	30,562,761	8,082,724	41,556,943	5,664,060	7,769,902	569,412	12,212,969	28,002,355	67.4	13,554,588	4,187,970	3,420,598	6,482,546
	3 mos.	9,782	86,904,154	22,202,203	117,973,389	16,034,221	22,646,716	1,725,001	35,070,629	80,776,779	68.5	37,196,610	11,450,159	8,978,936	12,888,044
Utah	Mar.	111	132,895	......	133,217	17,362	41,528	507	39,689	103,450	77.7	29,767	16,528	13,109	20,767
	3 mos.	111	413,182	......	413,582	48,514	129,334	1,693	120,546	312,912	75.7	100,670	56,248	41,711	50,589
Virginian	Mar.	657	2,663,480	7,356	2,754,870	258,840	546,796	24,839	555,526	1,440,610	52.3	1,314,260	579,260	633,649	617,474
	3 mos.	657	7,625,282	22,109	7,882,827	715,312	1,609,361	75,094	1,652,017	4,233,873	53.7	3,648,954	1,663,954	1,868,269	1,888,866
Wabash	Mar.	2,393	7,016,515	964,002	8,455,575	1,056,163	926,115	79,955	2,369,210	4,665,147	55.2	3,790,528	1,202,108	896,433	1,068,120
	3 mos.	2,393	19,850,467	2,668,325	23,853,474	2,778,827	2,807,413	426,400	7,274,496	13,996,218	58.7	9,857,256	3,425,459	2,405,069	2,781,707
Ann Arbor	Mar.	294	468,090	7,213	484,207	68,964	89,210	13,178	196,831	379,354	78.3	104,853	54,836	52,425	83,500
	3 mos.	294	1,399,511	20,512	1,446,206	176,174	249,898	46,167	603,170	1,108,357	76.6	337,849	180,649	168,666	170,760
Western Maryland	Mar.	840	3,090,621	33,761	3,210,875	398,646	585,928	47,633	859,199	1,982,361	61.7	1,228,514	557,514	586,184	793,927
	3 mos.	840	9,242,862	94,234	9,605,362	1,021,130	1,703,020	130,727	2,618,936	5,737,557	59.7	3,867,805	2,029,805	2,122,042	2,267,273
Western Pacific	Mar.	1,195	3,772,077	656,064	4,558,776	605,577	656,545	83,825	1,263,992	2,756,182	60.5	1,802,594	697,687	525,953	843,594
	3 mos.	1,195	9,412,770	1,674,805	11,490,972	1,505,611	1,697,431	238,805	3,589,308	7,444,516	64.8	4,046,456	1,736,590	1,320,516	1,849,409
Wheeling & Lake Erie	Mar.	507	1,982,952	......	2,034,003	195,492	407,831	42,023	606,067	1,303,555	64.1	730,448	88,561	257,431	310,428
	3 mos.	507	5,689,214	16	5,841,518	554,324	1,165,224	124,028	1,771,840	3,771,312	64.6	2,070,206	176,486	750,404	870,288

Table of Freight Operating Statistics appears on next lef-hand page

Freight Operating Statistics of Large Steam Railways—Selected Items

Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (thousands)	Car-miles: Per cent loaded	Ton-miles (thousands): Gross excl. locos. & tenders	Ton-miles (thousands): Net-rev. and non-rev.	Road locos. on line: Serviceable: Unstored	Road locos. on line: Serviceable: Stored	Road locos. on line: B. O.	Road locos. on line: Per cent B. O.
New England Region:												
Boston & Albany 1944	362	159,652	192,029	38,840	3,880	63.5	259,436	112,480	79	..	14	15.1
1943	362	147,235	177,945	33,800	3,566	64.0	241,167	106,753	82	..	9	9.9
Boston & Maine..... 1944	1,807	391,854	454,958	48,030	13,621	66.4	904,255	404,382	158	..	20	11.2
1943	1,812	397,392	479,190	52,922	12,597	64.5	862,221	387,529	143	..	29	16.9
N. Y., New H. & Hartf.†.... 1944	1,815	525,150	641,047	59,072	19,035	67.2	1,205,628	539,826	242	1	32	17.5
1943	1,816	479,437	599,906	59,278	16,677	65.8	1,074,383	475,182	220	10	38	14.9
Great Lakes Region:												
Delaware & Hudson..... 1944	848	350,755	438,967	42,232	14,678	67.0	1,063,053	567,935	139	26	41	19.9
1943	848	319,520	389,882	38,091	11,846	65.1	869,974	456,562	151	34	38	17.0
Del., Lack. & Western..... 1944	971	368,472	431,551	70,516	14,950	68.3	1,014,509	489,005	159	15	27	13.4
1943	982	367,866	449,388	80,887	15,261	67.3	1,039,741	500,566	160	6	29	14.9
Erie 1944	2,244	1,068,826	1,156,076	85,529	47,703	65.6	3,180,601	1,422,589	311	..	88	22.1
1943	2,242	944,349	1,038,485	79,767	40,612	66.8	2,710,739	1,233,876	319	3	81	20.1
Grand Trunk Western..... 1944	1,026	283,007	297,180	3,790	8,824	66.7	576,946	257,938	65	..	14	17.7
1943	1,026	280,625	287,873	2,856	8,088	64.8	551,419	250,146	69	2	13	15.5
Lehigh Valley 1944	1,247	538,079	595,390	83,076	21,499	59.9	1,565,007	733,193	154	..	13	7.8
1943	1,248	433,776	474,011	66,716	17,505	62.3	1,252,085	605,323	140	..	17	10.8
New York Central..... 1944	10,325	3,703,176	4,003,422	270,580	137,051	62.4	9,766,554	4,593,113	1,166	7	231	16.5
1943	10,396	3,520,892	3,832,905	246,966	127,577	62.2	9,217,840	4,387,640	1,205	5	216	15.1
New York, Chi. & St. L..... 1944	1,657	865,391	881,258	11,178	32,870	64.7	2,222,298	1,001,944	172	..	16	8.5
1943	1,657	816,253	825,374	10,434	29,523	64.4	2,027,222	942,877	166	..	12	6.7
Pere Marquette 1944	1,945	448,193	464,390	12,684	14,380	64.6	1,005,575	483,112	143	..	20	12.3
1943	1,998	466,231	485,840	11,372	13,445	52.7	942,835	447,141	141	1	20	12.3
Pitts. & Lake Erie..... 1944	229	94,093	99,382	277	3,971	63.6	339,220	197,580	29	..	16	35.6
1943	233	91,510	96,012	16	3,744	61.1	334,662	195,599	36	1	11	22.9
Wabash 1944	2,381	729,892	758,907	18,920	27,011	71.6	1,750,007	832,164	175	7	41	18.4
1943	2,381	713,163	745,037	16,790	24,935	69.2	1,652,109	777,851	178	9	35	15.8
Central Eastern Region:												
Baltimore & Ohio..... 1944	6,109	2,332,558	2,840,472	287,258	76,396	62.7	5,539,686	2,703,205	898	2	221	19.7
1943	6,116	2,322,508	2,861,096	328,575	73,645	62.7	5,380,404	2,634,656	909	2	222	19.6
Central of New Jersey†..... 1944	655	245,140	287,833	64,703	8,856	60.0	657,009	327,356	138	2	16	10.3
1943	657	250,554	292,011	57,560	7,929	61.7	591,893	307,775	130	2	22	14.3
Chicago & Eastern Ill..... 1944	912	304,079	310,729	9,481	8,818	60.0	632,007	288,777	80	..	6	7.0
1943	912	262,861	277,906	10,067	8,039	59.5	583,176	267,559	65	..	10	13.3
Elgin, Joliet & Eastern..... 1944	392	134,376	138,570	4,052	3,715	65.6	292,818	159,010	63	..	13	17.1
1943	392	137,218	139,706	1,952	3,574	62.4	288,526	154,672	67	..	9	11.8
Long Island 1944	372	36,308	38,055	15,640	408	58.7	29,982	13,274	46	..	8	14.8
1943	374	31,325	32,757	18,945	334	55.7	25,355	10,784	44	..	4	8.3
Pennsylvania System 1944	9,882	4,829,232	5,643,676	717,927	177,547	61.2	12,953,456	6,181,710	2,017	..	194	8.8
1943	9,938	4,269,195	5,027,329	696,431	150,594	61.8	10,999,682	5,309,147	1,960	..	179	8.4
Reading 1944	1,415	586,552	667,257	88,766	19,747	64.3	1,516,403	820,971	282	1	40	12.4
1943	1,419	595,843	665,621	80,367	18,388	61.7	1,461,652	790,637	279	8	36	11.1
Pocahontas Region:												
Chesapeake & Ohio..... 1944	3,032	1,134,674	1,244,095	61,734	48,998	56.8	4,251,901	2,405,292	445	1	74	14.2
1943	3,034	1,017,864	1,098,027	48,673	43,134	56.2	3,744,796	2,098,330	438	2	70	13.7
Norfolk & Western..... 1944	2,132	828,643	906,949	72,933	36,068	58.7	3,183,341	1,745,784	300	10	22	6.6
1943	2,134	791,502	870,119	75,125	34,088	59.0	3,017,368	1,679,835	310	6	22	6.5
Southern Region:												
Atlantic Coast Line..... 1944	4,953	1,062,740	1,090,696	15,128	28,862	61.7	1,970,593	858,078	377	5	19	4.7
1943	4,982	1,034,199	1,063,191	15,702	27,807	63.0	1,901,638	851,528	379	4	21	5.2
Central of Georgia†..... 1944	1,783	350,778	360,490	5,675	8,419	68.0	566,568	265,489	95	..	10	9.5
1943	1,783	300,570	306,272	5,984	7,042	71.3	468,499	224,898	108	..	9	7.7
Gulf, Mobile & Ohio..... 1944	1,962	304,615	384,128	1,140	10,671	74.7	685,726	346,156	111	..	10	8.3
1943	1,962	372,579	467,139	5,117	12,140	69.3	826,769	412,442	115	..	7	5.7
Illinois Central (incl. 1944	6,347	1,771,719	1,786,732	33,852	66,496	62.0	4,738,265	2,215,412	656	..	47	6.7
Yazoo & Miss. Vy) 1943	6,349	1,773,717	1,796,126	35,657	62,487	61.8	4,554,834	2,167,720	624	1	62	9.0
Louisville & Nashville..... 1944	4,736	1,594,702	1,743,697	46,880	39,885	64.4	2,864,139	1,480,190	420	2	59	12.3
1943	4,735	1,502,887	1,627,743	43,279	36,565	62.9	2,690,067	1,392,495	428	4	54	11.1
Seaboard Air Line* 1944	4,165	991,419	1,190,168	16,869	27,176	66.9	1,809,035	809,514	326	..	36	9.9
1943	4,171	937,005	1,034,858	13,885	24,630	68.4	1,677,331	785,077	319	..	23	6.7
Southern 1944	6,479	2,160,979	2,207,709	34,401	48,698	70.1	3,129,381	1,474,157	612	..	83	11.9
1943	6,478	1,997,766	2,042,729	30,898	43,186	68.9	2,836,708	1,339,261	607	..	69	10.2
Northwestern Region:												
Chi. & North Western†..... 1944	8,098	1,064,071	1,120,955	23,913	32,996	68.8	2,208,028	1,039,374	371	25	109	21.6
1943	8,098	1,005,422	1,050,602	23,324	28,804	64.0	2,035,275	907,326	378	20	97	19.6
Chicago Great Western..... 1944	1,445	308,419	318,205	12,362	9,659	71.0	638,225	294,135	68	..	11	13.9
1943	1,447	281,478	286,996	15,478	8,446	70.7	566,088	263,329	78	..	4	4.9
Chi., Milw., St. P. & Pac.†.. 1944	10,732	1,524,034	1,626,045	72,398	49,254	68.7	3,299,593	1,600,196	527	31	87	13.5
1943	10,783	1,506,740	1,610,687	73,975	45,125	67.5	3,135,633	1,532,906	517	29	65	10.6
Chi., St. P., Minneap. & Om.. 1944	1,606	229,908	246,405	14,732	5,665	64.2	407,209	188,139	89	30	9	7.0
1943	1,618	220,809	243,411	13,992	5,176	64.5	368,519	170,825	104	17	8	6.2
Duluth, Missabe & I. R..... 1944	544	30,446	30,559	760	536	59.3	36,329	17,713	23	11	20	37.0
1943	545	28,038	28,313	371	426	56.9	28,403	12,787	27	19	13	22.0
Great Northern 1944	8,278	1,205,490	1,204,077	49,812	42,313	69.8	2,912,302	1,426,176	399	15	65	13.6
1943	8,022	1,053,727	1,056,807	39,050	35,903	71.2	2,483,547	1,223,376	406	18	61	12.6
Min., St. P. & S. St. M.†... 1944	4,259	511,705	526,022	9,825	13,148	63.9	944,677	458,011	134	2	7	4.9
1943	4,258	450,600	460,177	7,618	10,600	66.7	731,082	354,308	128	3	5	3.7
Northern Pacific 1944	6,571	971,834	1,043,071	84,200	38,486	72.3	2,645,551	1,371,950	369	20	55	12.4
1943	6,571	909,738	981,215	78,684	33,049	77.0	2,214,803	1,170,807	383	6	52	11.8
Central Western Region:												
Alton† 1944	915	250,385	272,101	1,595	6,776	68.7	449,899	240,902	70	5	3	3.8
1943	915	262,556	280,979	722	6,774	66.8	482,695	238,716	75	..	1	1.3
Atch., Top. & S. Fe (incl. 1944	13,123	3,047,986	3,259,058	195,133	106,328	68.0	7,031,769	3,022,904	826	6	121	12.7
G. C. & S. F. & P. & S. F.) 1943	13,160	2,753,837	3,006,340	197,709	85,374	63.7	5,986,096	2,484,175	824	..	96	10.4
Chi., Burl. & Quincy..... 1944	8,794	1,438,913	1,517,070	46,597	50,870	64.5	3,595,920	1,699,106	490	..	70	12.5
1943	8,833	1,381,734	1,459,061	50,851	47,151	67.3	3,247,117	1,589,745	495	..	66	11.8
Chi., Rock I. & Pac.† 1944	7,718	1,348,047	1,407,093	17,814	40,477	68.9	2,612,498	1,177,156	383	..	76	16.6
1943	7,740	1,437,267	1,497,359	19,976	40,935	68.2	2,726,238	1,235,934	395	..	80	16.8
Denver & R. G. Wn.†..... 1944	2,399	409,236	466,171	71,929	13,381	77.7	861,260	446,118	172	3	47	21.2
1943	2,405	430,322	502,993	82,364	13,323	70.6	902,288	445,032	182	3	30	14.0
Southern Pacific—Pac. Lines. 1944	8,194	2,161,457	2,487,682	374,885	90,640	70.5	5,836,674	2,537,372	832	1	110	11.7
1943	8,245	2,064,335	2,338,641	349,184	80,602	66.8	5,420,673	2,336,409	825	9	108	11.5
Union Pacific 1944	9,782	3,048,207	3,273,147	296,726	106,329	71.6	6,904,353	3,260,243	838	..	68	7.5
1943	9,837	2,614,166	2,773,694	215,849	86,441	67.2	5,943,869	2,774,136	789	..	86	9.8
Southwestern Region:												
Mo.-Kans.-Texas Lines 1944	3,281	692,402	713,054	11,822	18,483	64.0	1,249,777	571,899	159	..	16	9.1
1943	3,281	711,061	733,676	13,153	19,860	61.3	1,353,259	597,685	161	..	13	7.5
Missouri Pacific† 1944	7,071	1,753,973	1,845,160	44,230	61,794	65.1	4,244,206	1,960,414	479	1	63	11.6
1943	7,070	1,752,207	1,845,673	41,149	55,524	64.4	3,880,371	1,787,642	498	2	61	10.9
Texas & Pacific 1944	1,882	445,483	445,483	6,485	15,420	70.4	993,268	412,539	114	17	17	11.5
1943	1,901	377,200	377,200	4,028	11,139	64.0	759,858	306,005	112	14	10	7.4
St. Louis-San Francisco† 1944	4,628	1,107,107	1,181,614	28,117	27,162	66.4	1,823,348	841,251	324	..	23	6.6
1943	4,640	989,596	1,055,824	21,539	22,993	64.3	1,590,490	734,690	328	..	26	7.3
St. Louis-San Fran. & Texas. 1944	159	33,791	34,473	....	595	70.6	36,414	15,033	8	..	2	20.0
1943	159	33,499	34,414	28	537	65.9	36,455	15,388	9	..	1	10.0
St. Louis Southw. Lines†.... 1944	1,600	506,426	516,690	7,294	17,071	69.1	1,063,012	459,885	117	4	26	17.7
1943	1,600	512,986	527,509	6,751	16,529	67.5	1,070,375	474,007	120	2	20	14.1
Texas & New Orleans..... 1944	4,339	1,148,815	1,155,822	32,734	31,519	66.2	2,088,842	916,764	261	1	19	6.8
1943	4,339	1,106,293	1,118,479	35,131	29,141	64.8	2,008,793	881,370	255	..	19	6.9

* Report of receivers.

† Report of trustee or trustees.

for the Month of February, 1944, Compared with February, 1943

Region, road, and year		Freight cars on line: Home	Foreign	Total	Per Cent B. O.	G.t.m. per train-hr. excl.locos. and tenders	G.t.m. per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day
New England Region:														
Boston & Albany	1944	302	5,643	5,945	0.5	23,572	1,636	709	20.0	634	34.4	10,714	214	95.2
	1943	358	5,705	6,063	.4	23,205	1,647	729	29.9	669	34.9	10,532	183	91.6
Boston & Maine	1944	1,854	11,051	12,905	2.3	34,524	2,315	1,035	29.7	1,135	57.6	7,717	101	103.3
	1943	2,753	12,660	15,413	1.5	28,842	2,181	980	30.8	920	46.4	7,638	114	113.9
N. Y., New H. & Hartf.†	1944	2,932	24,132	27,064	2.1	33,083	2,330	1,043	28.4	707	37.1	10,256	108	95.7
	1943	3,486	22,766	26,252	1.3	30,781	2,277	1,007	28.5	685	36.5	9,345	112	93.5
Great Lakes Region:														
Delaware & Hudson	1944	3,532	8,192	11,724	1.5	48,932	3,047	1,628	38.7	1,782	68.8	23,094	113	82 1
	1943	4,192	5,267	9,459	4.0	43,207	2,734	1,435	38.5	1,682	67.0	19,229	116	71.7
Del., Lack. & Western	1944	4,783	13,996	18,779	2.8	39,429	2,784	1,342	32.7	870	38.9	17,366	135	93.4
	1943	6,212	12,727	18,939	2.6	39,733	2,880	1,387	32.8	956	43.3	18,205	135	105.0
Erie	1944	10,728	29,972	40,700	2.4	46,010	2,994	1,339	29.8	1,207	61.7	21,860	105	115.2
	1943	13,348	25,695	39,043	2.2	46,085	2,889	1,315	30.4	1,174	57.9	19,655	105	108.5
Grand Trunk Western	1944	2,278	6,056	8,334	4.1	41,243	2,057	919	29.2	1,114	57.1	8,669	92	139.1
	1943	2,617	7,767	10,384	3.1	39,975	1,978	897	30.9	859	42.9	8,707	95	133.7
Lehigh Valley	1944	5,961	24,147	30,108	2.1	44,287	3,010	1,410	34.1	845	41.4	20,275	124	147.0
	1943	7,634	20,403	28,037	1.4	44,094	3,000	1,451	34.6	763	35.4	17,323	126	129.9
New York Central	1944	43,220	112,658	155,878	2.4	38,644	2,670	1,256	33.5	1,027	49.1	15,340	114	115.1
	1943	50,505	97,459	147,964	2.9	38,701	2,659	1,266	34.4	1,056	49.4	15,073	110	113.2
New York, Chi. & St. L.	1944	2,637	13,635	16,272	2.3	42,644	2,587	1,167	30.5	2,089	105.9	20,851	94	167.9
	1943	3,010	15,994	19,004	1.9	43,328	2,497	1,161	31.9	1,762	85.7	20,322	95	174.6
Pere Marquette	1944	2,326	10,123	12,449	1.9	38,354	2,276	1,094	33.6	1,405	64.7	8,565	96	107.5
	1943	3,344	9,868	13,212	2.3	34,418	2,066	980	33.3	1,234	58.0	7,993	100	116.3
Pitts. & Lake Erie	1944	2,778	8,122	10,900	3.6	47,697	3,623	2,110	49.8	566	17.9	29,752	101	85 4
	1943	3,792	8,326	12,118	3.8	47,775	3,668	2,144	52.2	558	17.5	29,981	97	74.1
Wabash	1944	5,898	13,045	18,943	1.8	44,608	2,429	1,155	30.8	1,441	65.4	12,052	114	125.4
	1943	7,429	13,230	20,659	1.1	43,934	2,346	1,104	31.2	1,345	62.4	11,668	115	126.5
Central Eastern R gion:														
Baltimore & Ohio	1944	32,802	52,657	85,459	2.8	29,515	2,430	1,186	35 4	1,033	46.5	15,258	160	99.8
	1943	39,060	48,594	87,654	2.5	29,410	2,366	1,159	35.8	1,062	47.4	15,385	157	105.5
Central of New Jersey†	1944	4,324	26,300	30,624	1.3	27,021	2,704	1,347	37.0	380	17.1	17,234	150	104.5
	1943	5,843	24,450	30,293	.8	27,252	2,400	1,248	38.8	393	16.4	16,731	146	108.9
Chicago & Eastern Ill.	1944	2,046	4,730	6,776	2.7	35,065	2,163	988	32.7	1,406	71.5	10,919	126	132 2
	1943	2,169	5,138	7,307	3.5	35,235	2,273	1,043	33.3	1,313	66.3	10,478	128	139.5
Elgin, Joliet & Eastern	1944	9,258	7,150	16,408	3.1	16,076	2,305	1,252	42.8	337	12.0	13,988	147	99.9
	1943	9,075	8,114	17,189	3.2	16,749	2,184	1,171	43.3	328	12.1	14,092	148	98.8
Long Island	1944	19	6,119	6,138	.3	6,558	852	377	32.5	81	4.2	1,230	319	50.7
	1943	13	4,407	4,420	.3	6,493	831	353	32.3	92	5.1	1,030	334	53.1
Pennsylvania System	1944	115,105	153,443	268,548	2.5	33,593	2,773	1,323	34.8	818	38.4	21,571	137	107.4
	1943	132,176	120,717	252,893	2.5	32,192	2,655	1,281	35.3	737	33.8	19,080	140	103.9
Reading	1944	11,901	33,547	45,448	1.4	27,717	2,593	1,404	41.6	627	23.4	20,007	140	90.0
	1943	14,831	25,127	39,958	2.6	29,803	2,460	1,331	43.0	718	27.1	19,899	128	92.6
Pocahontas Region:														
Chesapeake & Ohio	1944	31,984	15,398	47,382	1.0	51,956	3,819	2,160	49.1	1,703	61.1	27,355	89	94.3
	1943	29,702	15,069	44,771	1.0	51,132	3,734	2,092	48.6	1,583	58.0	24,700	85	88.6
Norfolk & Western	1944	29,276	6,820	36,096	1.4	59,541	3,910	2,144	48 4	1,662	58.5	28,236	99	109.8
	1943	26,896	7,888	34,784	2.0	56,898	3,877	2,159	49.3	1,652	56.8	28,113	99	108.3
Southern Region:														
Atlantic Coast Line	1944	7,505	22,369	29,874	2.4	29,402	1,867	813	29.7	987	53.8	5,974	116	101.8
	1943	8,256	21,327	29,583	2.7	28,670	1,850	828	30.6	980	50.8	6,104	111	105.0
Central of Georgia†	1944	1,742	6,632	8,374	.8	29,450	1,628	763	31.5	1,060	49.4	5,134	128	124 8
	1943	2,310	6,059	8,369	1 2	27,423	1,569	753	31.9	961	42.2	4,505	126	103.0
Gulf, Mobile & Ohio	1944	1,991	7,660	9,651	1.1	39,633	2,258	1,140	32.4	1,288	53.1	6,084	120	115.4
	1943	2,531	7,014	9,545	1.0	40,047	2,238	1,117	34.0	1,600	67.9	7,508	116	143.2
Illinois Central (incl. Yazoo & Miss. Vy)	1944	17,759	34,011	51,770	.7	43,487	2,735	1,279	33.3	1,472	71.3	12,036	125	92.8
	1943	19,294	32,152	51,446	1.0	41,111	2,615	1,245	34.7	1,490	69.5	12,194	122	99.1
Louisville & Nashville	1944	29,308	15,867	45,175	2.0	27,048	1,796	928	37.1	1,131	47.3	10,777	133	134.1
	1943	28,260	14,513	42,773	2.4	26,665	1,790	927	38.1	1,106	46.2	10,503	133	128.6
Seaboard Air Line*	1944	6,114	21,911	28,025	1.4	29,721	1,867	836	29.8	1,011	50.7	6,702	137	126 8
	1943	7,576	21,193	28,769	1.4	27,038	1,840	861	31.9	983	45.1	6,722	127	124.2
Southern	1944	15,547	32,260	47,807	1.7	24,200	1,470	693	30.3	1,056	49.8	7,846	151	117.1
	1943	17,668	28,969	46,637	1.7	23,790	1,442	681	31.0	998	46.7	7,384	151	115.8
Northwestern Region:														
Chi. & North Western†	1944	21,250	35,070	56,320	3.1	32,712	2,154	1,014	31.5	665	30.7	4,426	136	84.3
	1943	21,622	28,366	49,988	4.2	30,472	2,093	933	31.5	626	31.0	4,002	139	83.1
Chicago Great Western	1944	1,172	4,777	5,949	.8	36,587	2,084	961	30.5	1,741	80.5	7,019	132	150.1
	1943	1,353	3,856	5,209	1.7	34,194	2,016	938	31.2	1,671	75.8	6,499	133	139.4
Chi., Milw., St. P. & Pac.†	1944	23,703	30,003	53,706	1.5	33,582	2,180	1,057	32.5	1,012	45.4	5,142	133	98 5
	1943	26,882	25,126	52,008	1.5	31,552	2,098	1,026	34.0	1,028	44.8	5,077	135	105.5
Chi., St. P., Minneap. & Om.	1944	933	7,592	8,525	4.0	26,444	1,819	840	33.2	768	36.1	4,040	123	72.5
	1943	1,482	6,937	8,419	8.9	22,860	1,697	787	33.0	728	34.2	3,771	124	73.9
Duluth, Missabe & I. R.	1944	15,077	509	15,586	2.8	15,486	1,277	623	33.0	39	2.0	1,123	170	26.3
	1943	14,731	472	15,203	3.1	14,717	1,055	475	30.0	30	1.8	838	190	23.7
Great Northern	1944	21,319	18,988	40,307	2.2	36,728	2,434	1,192	33.7	1,255	53.3	5,941	113	96.7
	1943	25,292	14,743	40,035	2.2	34,720	2,374	1,169	34.1	1,032	42.6	5,447	117	86.0
Min., St. P. & S. St. M.†	1944	6,172	9,767	15,939	2.6	32,541	1,884	913	34.8	1,011	45.4	3,708	104	128 8
	1943	7,844	5,939	13,783	4.3	27,558	1,640	795	33.4	908	40.7	2,972	115	125.1
Northern Pacific	1944	15,939	16,994	32,933	3.9	41,635	2,733	1,417	35.6	1,452	56.4	7,200	137	94.0
	1943	19,797	13,902	33,699	3.5	36,306	2,443	1,291	35.4	1,225	44.9	6,363	142	92.0
Central Western Region:														
Alton†	1944	949	5,161	6,110	3.3	37,966	1,816	973	35 6	1,380	56.5	9,079	142	130.6
	1943	1,088	5,480	6,568	2.8	36,909	1,844	912	35.2	1,286	54.6	9,318	136	138.4
Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1944	41,484	40,597	82,081	2,6	41,229	2,322	998	28.4	1,261	65.2	7,943	122	129.5
	1943	48,160	38,579	86,739	3.2	37,633	2,186	907	29.1	1,011	54.6	6,742	126	130.5
Chi., Burl. & Quincy	1944	17,070	30,646	47,716	1.9	39,514	2,516	1,189	33.4	1,220	56.6	6,662	116	101 7
	1943	16,980	22,708	39,688	2.5	38,230	2,369	1,160	33.7	1,411	62.2	6,428	109	102.4
Chi., Rock I. & Pac.†	1944	10,494	21,359	31,853	3.0	34,485	1,947	877	29.1	1,210	60.3	5,259	122	111.4
	1943	12,998	21,790	34,788	3.9	32,476	1,910	866	30.2	1,249	60.7	5,703	125	120.5
Denver & R. G. Wn.†	1944	8,256	6,410	14,666	3.2	30,922	2,135	1,106	33.3	989	38.2	6,412	185	88.4
	1943	7,753	10,023	17,776	2.4	27,437	2,115	1,043	33.4	905	38.4	6,609	184	102.8
Southern Pacific—Pac. Lines	1944	24,487	58,953	83,440	2.2	37,600	2,722	1,183	28.0	1,058	53.6	10,678	105	111.3
	1943	28,354	58,902	87,256	2.1	33,325	2,642	1,139	29.0	951	49.2	10,120	108	108.4
Union Pacific	1944	25,813	38,204	64,017	2.7	42,542	2,309	1,090	30.7	1,724	78.5	11,493	140	141 3
	1943	30,043	43,528	73,571	2.6	39,569	2,295	1,071	32.1	1,345	62.3	10,072	132	125.5
Southwestern Region:														
Mo.-Kans.-Texas Lines	1944	2,098	7,284	9,382	0.5	33,350	1,812	829	30.9	2,124	107.2	6,011	92	151.9
	1943	3,061	10,758	13,819	1.1	31,972	1,919	848	30.1	1,485	80.5	6,506	95	163.6
Missouri Pacific†	1944	11,261	29,396	40,657	1.5	41,195	2,432	1,123	31.7	1,652	80.0	9,560	109	126.8
	1943	10,015	36,876	46,891	1.1	36,656	2,225	1,025	32.2	1,351	65.1	9,030	117	128.3
Texas & Pacific	1944	1,861	7,303	9,164	1.4	40,321	2,247	933	26.8	1,643	87.3	7,559	94	111.4
	1943	2,156	5,919	8,075	.8	37,932	2,055	828	27.5	1,435	81.7	5,749	110	105.5
St. Louis-San Francisco†	1944	7,431	12,336	19,767	2.0	31,966	1,653	763	31.0	1,468	71.3	6,268	141	121 8
	1943	8,204	10,785	18,989	3.1	31,137	1,619	748	32.0	1,408	68.5	5,655	139	114.0
St. Louis-San Fran. & Texas	1944	....	250	250	9.6	20,619	1,082	447	25.3	2,129	119.4	3,260	132	120.9
	1943	....	354	354	11.0	19,217	1,090	460	28.7	1,602	84.9	3,456	130	120.4
St. Louis Southw. Lines†	1944	1,111	5,734	6,845	.6	34,457	2,109	913	26 9	2,229	119.7	9,911	88	126.5
	1943	1,326	7,406	8,732	1.2	32,606	2,096	928	28.7	1,913	98.8	10,581	90	139.7
Texas & New Orleans	1944	4,074	17,018	21,092	2.0	31,486	1,842	809	29.1	1,409	73.2	7,286	93	152.2
	1943	4,082	20,195	24,277	1.9	31,247	1,841	808	30.2	1,311	66.9	7,255	91	157.1

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

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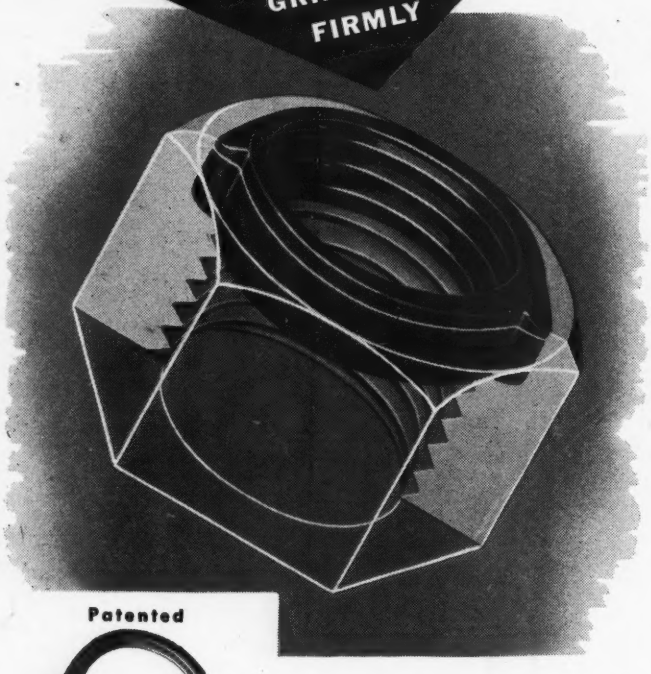

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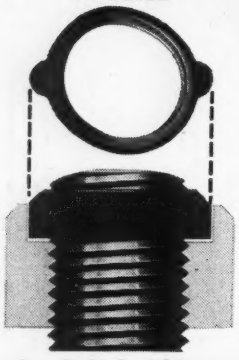

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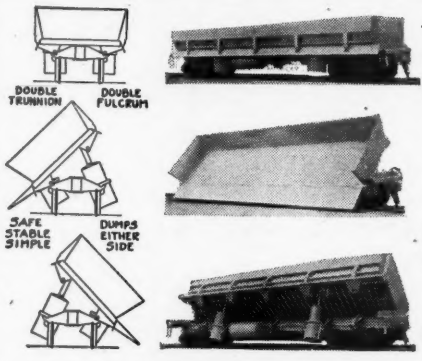

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